



REPORT OF APOLLO 204 REVIEW BOARD

TO
THE ADMINISTRATOR
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

APPENDIX B

DRA

APOLLO SPACECRAFT

The spacecraft (S/C) consists of a launch escape system (LES) assembly, command module (C/M), service module (S/M), and the spacecraft/lunar module adapter (SLA). The LES assembly provides the means for rapidly separating the C/M from the S/M during pad or suborbital aborts. The C/M forms the spacecraft control center, contains necessary automatic and manual equipment to control and monitor the spacecraft systems, and contains the required equipment for safety and comfort of the crew. The S/M is a cylindrical structure located between the C/M and the SLA. It contains the propulsion systems for attitude and velocity change maneuvers. Most of the consumables used in the mission are stored in the S/M. The SLA is a truncated cone which connects the S/M to the launch vehicle. It also provides the space wherein the lunar module (L/M) is carried on lunar missions.

TEST IN PROGRESS AT TIME OF ACCIDENT

Spacecraft 012 was undergoing a "Plugs Out Integrated Test" at the time of the accident on January 27, 1967. Operational Checkout Procedure, designated OCP FO-K-0021-1 applied to this test. Within this report this procedure is often referred to as OCP-0021.

TESTS AND ANALYSES

Results of tests and analyses not complete at the time of publication of this report will be contained in Appendix G, Addenda and Corrigenda.

CONVERSION OF TIME

Throughout this report, time is stated in Greenwich Mean Time (GMT). To convert GMT to Eastern Standard Time (EST), subtract 17 hours. For example, 23:31 GMT converted is 6:31 p.m. EST.

WITNESS STATEMENTS & RELEASES
APPENDIX B
TO
FINAL REPORT OF
APOLLO 204 REVIEW BOARD

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APPENDIX B

WITNESS STATEMENTS AND RELEASES

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The presentation of witness statements is in order of importance to the incident as determined by the Task Panel 12 (Witness Statements).

INDEX OF WITNESSES STATEMENTS ENCLOSED

Number	Name	Organization	Position	Location During Accident
1	Babbitt, Donald O.	NAA	Project Engineer, Pad Leader	Adjustable Level A8, Service Structure
2	Gleaves, James D.	NAA	Mechanical Lead Tech- nician	Adjustable Level A8, Service Structure
3	Curatolo, Lewis	NAA	Project Engineer, Pad Leader	* Adjustable Level A8, Service Structure
4	Reece, L. D.	NAA	Systems Technician	Adjustable Level A8, Service Structure
5	Hagar, Richard A.	NAA	Systems Technician, (Electrician)	Adjustable Level A8, Service Structure
6	Bachand, Richard L.	NAA	Systems Technician	Adjustable Level A8, Service Structure
7	Clemmons, Stephen B.	NAA	Systems Technician	Adjustable Level A8, Service Structure
8	Cromer, James Earl	PAA	Elevator Technician	200-foot Level, Umbilical Tower
9	Pleasant, Joseph H.	NAA	Systems Technician	Adjustable Level A8, Service Structure
10	Davis, Bruce W.	NAA	Systems Technician	Adjustable Level A8, Service Structure
11	Hickenbottom, Friend Dale	NAA	Systems Technician	Adjustable Level A8, Service Structure
12	Hawkins, Jerry W.	NAA	Systems Technician	Adjustable Level A8, Service Structure
13	Brown, W. Donald	NAA	Mechanical Inspector	Command Module - Adjust- able Level A8
14	Owens, Jessie L.	NAA	Systems Engineer	Adjustable Level A8, Service Structure
15	Hedlund, Robert C.	NAA	Systems Technician	Adjustable Level A8, Service Structure
16	Markovich, John E.	NASA	QC Inspector	Adjustable Level A8, Service Structure

* Left Adjustable Level A8 at 1730. Returned to relieve Babbitt at approximately 1838.

17	Stoeckl, Joseph L.	NASA	QC Inspector	Adjustable Level A8, Service Structure
18	Rogers, Henry H., Jr.	NASA	QC Inspector	Adjustable Level A8, Service Structure
19	Journey, Creed A.	NAA	Electrical Leadman	Adjustable Level A8, Service Structure
22	Schneider, William J.	NAA	GSE Technician	Adjustable Level A7, Service Structure
21	Howard, Dave E.	NAA	Systems Technician	Adjustable Level A7, Service Structure
22	Scott, J. C.	NAA	QC Inspector	Adjustable Level A7, Service Structure
23	Bass, Robert I.	NAA	Systems Technician	200 Foot Level, Umbilical Tower
24	McConnell, John C.	NAA	GSE Technician	Umbilical Tower - 190 Foot Level
25	Belt, Burt B.	NAA	GSE Leadman	Elevator, 2nd Level, Pad 34
26	Rackleff, George W.	NAA-Tulsa	Systems Technician	Adjustable Level A7, Service Structure
27	Williams, Samuel	NAA	GSE Technician	Adjustable Level A7, Service Structure
28	Rooker, Forrest R.	NAA	GSE Technician	Adjustable Level A7, Service Structure
29	Wingfield, William H.	NAA	GSE Electrical Technician	Adjustable Level A5
30	Nelson, Marvin L.	NASA	QC Inspector	Adjustable Level A7, Service Structure
31	Mitchell, Patrick E.	NASA	QC Inspector	Adjustable Level A7, Service Structure
32	Deaver, William C.	NAA	Electronic Technician	Adjustable Level A7, Service Structure
33	Medcalf, Willis M.	NAA	Mechanical Technician	Elevator (3rd level going up to A8) Complex 34
34	Foster, Robert C.	NAA	QC Inspector	Complex 34 Fuel Area
35	Chauvin, Clarence A.	NASA/KSC	Test Conductor	Acceptance Checkout Equipment, Room 1, MSO Bldg.

36	Schick, William H.	NASA/KSC (DLO)	Assistant Test Supervisor	Test Supervisor's Console LCC 34 Blockhouse
37	Propst, Gary W.	RCA	Technician, OTV, Control Racks	Communication Control Racks LC 34 Blockhouse
38	Caswell, Alan R.	RCA	Communications Controller	Communication Control Racks LC 34 Blockhouse
39	Slayton, Donald K.	NASA/MSC	Director of Flight Crew Operations	Astronaut Console - LCC 34
40	Cain, Daryl O.	NAA	Spacecraft Test Conductor (017)	Acceptance Checkout Equip- ment Room 2, MSO Bldg.
41	Jones, Donald R.	NASA/KSC	Chief, S-IVB, Elect- rical Systems	LC 34 Blockhouse, VIP Room
* 42	Eybel, Charles G., Jr. and Rubio, Jose Manuel	GE	Technical Audio Monitors	CIF Building
43	Jorolan, Albert E.	NASA/KSC	LVO Measuring In- strumentation Engineer	LC 34 Blockhouse
44	West, LeRoy G.	NAA	Spacecraft Technician	LC 34, Level A-8 at Ingress
45	Burch, James A., Jr.	PAA	Fireman	Cape Kennedy Fire Station
46	Mooney, James C.	PAA	Asst. Chief, Fire Dept.	Cape Kennedy Fire Station

INDEX OF WITNESSES STATEMENTS IN GENERAL FILE

A. T.V. MONITORS

Name	Organization	Position	Location During Accident
Allen, Ernest E.	Chrysler	Supervisor	LC 34 Blockhouse
Anderson, Robert L. III	Chrysler	Technician	LC 34 Blockhouse
Barwick, Dean E.	NASA/KSC	Flight Crew Systems Engineer	LC 34 Blockhouse
Bishop, Charles M.	Chrysler	S-IB Events Display Console Monitor	LC 34 Blockhouse
Blasky, M.	Douglas	Associate Engineer Scientist	CIF Building Room 307
Blocker, R. D.	Douglas	S-IVB Stage Historian	LC 34 Blockhouse
Brinda, W.	Douglas	Engineer, Measuring Panel Monitor	LC 34 Blockhouse
Broadbent, Joseph W.	Chrysler	Console Operator	LC 34 Blockhouse
Brown, William O.	Chrysler	OIS Monitor	LC 34 Blockhouse
Brunais, Ellsworth G.	Chrysler	Flight Control Console Monitor	LC 34 Blockhouse
Bunyak, R. S.	Douglas	Propulsion Panel Monitor	LC 34 Blockhouse
Carothers, Dale	NASA/KSC	Spacecraft Test Conductor	ACE Control Room #1 MSO Bldg.
Cheesborough, Richard S.	NASA/KSC	ST-184-M Systems Engineer	CIF Building Room 307
Childers, Leonard H., Jr.	Chrysler	Monitor Swing Arm Panels	Complex 34 Trailer 1-048
Coleman, Gerald C.	Douglas	Branch Chief Development Engineer	LC 34 Blockhouse
Conely, F. E.	Douglas	S-IV B Test Conductor	LC 34 Blockhouse
Coonce, James M.	NASA/KSC	Operator Console A4	LC 34 Blockhouse
Dillon, James E.	Chrysler	ECS Technician	LC 34 Blockhouse

Donnelly, Paul C.	NASA/KSC	Launch Operations Manager	LC 34 Blockhouse
Eddy, Robert W.	Chrysler	Monitor, Firing Panels	LC 34 Blockhouse
Edson, William	NAA	Test Conductor	ACE Control Room 1 MSO
Elliott, John G.	Douglas	Supervisor, IB, Mechanics & Reliability	CIF Building
Eri, Donald G.	RCA	Manager RCA Operations LCC 34 and 37	LC 34
Gaskins, R. B.	NASA/KSC	Test Project Engineer (S/C 017)	Observation Room 2 MSO
Gay, Charles D.	NASA/KSC	Chief, Spacecraft Test Conductor	LC 34 Blockhouse
Gehres, Charles E.	Chrysler	Technician	LC 34 Blockhouse
Grant, Fred C.	Douglas	Associate Engineer Scientist	CIF Building Room 307
Grucne, Hans F. Dr.	NASA/KSC	Director, Launch Vehicle Operations	LC 34 Blockhouse
Harris, Robert V.	Chrysler	Technician	LC 34 Blockhouse
Hoenstine, T.V.	IBM	I. U. Measuring and Tracking Panel Operator	LC 34 Blockhouse
Jatulso, A. J.	Douglas	Electronics Supervisor	LC 34 Blockhouse
Jolly, Dennis M.	NAA	Environmental Control System Engineer	ACE Control Room 1 MSO
Jumpa, J. J.	GE/ASD	ACE Display Monitor	LC 34 Blockhouse
Kapryan, Walter J.	NASA/MSC	Assistant Apollo Program Manager	LC 34 Blockhouse
Kelley, James A.	NASA/KSC	Monitor TV Console	LC 34 Blockhouse
King, John W.	NASA/KSC	Chief Public Information	LC 34 Blockhouse
Kleinschmidt, CIL	Douglas	Group Engineer - ORD/HYD	LC 34 Blockhouse
Kranzfelder, William J.	AC Electronics	Associate Project Engineer (G&N)	ACE Control Room 1 MSO
Kuznicki, Henry S.	NAA	Test Conductor	ACE Control Room 1 MSO

Lealman, Roy E.	NASA/KSC	Electrical Engineer	LC 34 Blockhouse
Lee, Chet M.	NASA Hqs.	Observer	LC 34 Blockhouse
Levetto, Mario J., Jr.	Chrysler	Technician ECS	LC 34 Blockhouse
Linsday, Thomas H. Jr.	NAA	Lead Engineer - Procedures	LC 34 Blockhouse
McDonald, Randolph D.	Chrysler	Technician	LC 34 Blockhouse
McCreary, Martin E.	NASA/KSC	SII Electrical Systems	LC 34 Blockhouse
McNally, Edward	Chrysler	Swing Arm Electrical Design Monitor	CIF Room 307
McNeely, Maurice L.	Douglas	Mechanical Engineer	LC 34 Blockhouse
Martin, Virgil M.	Chrysler	Technician	LC 34 Blockhouse
Mason, Lyman, H.	Chrysler	Electrical Monitor	CIF Room 307
Mercier, Alfred B.	Chrysler	Console Operator	LC 34 Blockhouse
Meyer, George C.	PAA	Pad Safety	LC 34 Blockhouse
Miller, K. J.	NASA/KSC	Electrical Engineer	OIS Monitor LC 34
Monshor, Raymond M.	Chrysler	Technician	LC 34 Blockhouse
Moser, Robert E.	NASA/KSC	Apollo/Saturn Test Manager	LC 34 Blockhouse
Neely, R. D.	Chrysler	Technician	Firing Room LC 34 Blockhouse
Nelson, Isaac H.	Chrysler	Water Control Panel Operator	LC 34 Blockhouse
Orman, Donald L.	NASA/KSC	Engineer, G&C	LC 34 Blockhouse
Page, George F.	NASA/KSC	Test Supervisor	LC 34 Blockhouse
Parker, Marion, J.	Chrysler	Fluid & Pneumatics Group Electrical Unit	CIF Room 208
Payne, Viron E.	NASA/KSC	Test Support Controller	LC 34 Blockhouse
Peacock, Max J.	Chrysler	S-IB Test Conductor	LC 34 Blockhouse
Perry, Earl M.	Chrysler	Monitor, Propellant Event Display Panel	LC 34 Blockhouse

Petrone, Rocco A.	NASA/KSC	Director of Launch Operations	LC 34 Blockhouse
Ragusa, James M.	NASA/KSC	Engineer (Egress Committee)	LC 34 Blockhouse
Rengers, William C.	Chrysler	Monitor, SIB Propellant Dispersion Panel	LC 34 Blockhouse
Rockwell, Richard G.	Chrysler	Procedure Coordinator	LC 34 Blockhouse
Roosa, Stuart A., Capt.	NASA/MSD	Astronaut	LC 34 Blockhouse
Sassard, Jack P.	FEC	Technician	LC 34 Blockhouse
Schiedel, Gerald F.	NASA/KSC	Test Conductor, Spacecraft 017	ACE Control Room 2 MSO
Scoville, Donald A.	NASA/KSC	Mechanical Systems Engineer	LC 34 Blockhouse
Siskind, Jay S.	NASA/KSC	Electrical Systems Engineer	LC 34 Blockhouse
Smith, George E.	Chrysler	Power Supply & Launch Sequence Panel Operator	LC 34 Blockhouse
Smith, Joe R.	NASA/KSC	Staff/Director of Information Systems	LC 34 Blockhouse
Smith, Wallace S.	Chrysler	Technician	LC 34 Blockhouse
Talone, John J.	NASA	Program Coordinator with MSFC	CIF Building Room 307
Terry, James F.	NASA/KSC	Guidance & Control Engineer	LC 34 Blockhouse
Toback, D.S.	IBM	Technician, Telemetry	LC 34 Blockhouse
Turner, Charles A.	General Electric	Egress Committee	LC 34 Blockhouse
Turner, John T.	NASA/KSC	Flight Comp. Systems Engineer	LC 34 Blockhouse
Weaver, Billy H.	Douglas	Test Planning and Evaluation	CIF Building Room 307
Williams, Michael F.	NAA	Flight Test Engineer	LC 34 Blockhouse
Wilson, Virgil C.	Chrysler	Console Supervisor	LC 34 Blockhouse
Yount, Lawrence H.	Chrysler	Manager, Launch Systems	LC 34 Blockhouse

B. AUDIO WITNESSES

Name	Organization	Position	Location During Accident
Barber, Chester E.	Chrysler	Technician	LC 34 Service Structure 1st Floor West Side
Branch, Robert B.	Chrysler	Acting SIOT	LC 34 OAT Room 152-foot Level
Crane, John D.	Douglas	Electronics Tech.	LC 34 116-foot Level
Daniher, Pete M.	Douglas	Vehicle Checkout Engineer	LC 34 Measuring Station
Eldridge, Robert T.	Chrysler	Technician	LC 34 116-foot Level
Gillespie, Dallas K.	Chrysler	Assistant SIOT	LC 34 OAT Room 152-foot Level
Ham, Edwin J.	Chrysler	Technician (SIOR Recorder Operator	LC 34 OAT Station 152- foot Level
Kelley, Dean W.	Chrysler	Technician	LC 34, 152-foot Level
Kelley, John E.	Chrysler	Technician Umbilical Eject Test	LC 34 88-foot Level
Kemppainen, Willard K.	NASA/KSC	Engineer (Egress Monitor)	LC 34 Blockhouse
Leckie, G.E.	IBM	Technician	LC 34 IU OAT Station
Lindemann, Vincent J.	Chrysler	Flight Control Recorder Operator	LC 34 Blockhouse
Martin, Obrey E.	Chrysler	Technician	LC 34, Support Bldg. Room 123
Matson, Claude D.	Chrysler	Technician	LC 34, 116-foot Level
Pendleton, Philip L.	Chrysler	Technician	LC 34 Blockhouse
Perkins, William J.	Chrysler	Technician	LC 34 Measuring Station
Rogers, Lyman F.	NASA/KSC	SI Quality Surveillance	LC 34 House Trailer
Roof, Jesse M., Jr.	Douglas	Engineer, GSE	LC 34 Level A-4 outside IU door
Schlict, Wilber G.	FEC	Technician	LC 34, AGOS Area

Tipton, Charles J.	Douglas	Electrical Technician	LC 34, Level A-4 Near forward interstage
Whitaker, Billy B.	Chrysler	Technician Monitor OIS	LC 34, AGCS Trailer 609
Whitehead, Claudius D. III	Chrysler	Technician RF & TM	LC 34

C. RELATED AREAS

Name	Organization	Position	Location During Accident
Aderhold, T.R.	FEC	Telemetry Technician	CIF Building Room 291
Anderson, Deal L.	Bendix	Engineering Specialist (02)	LC 34 Umbilical Tower 220-foot Level
Barnum, George V.	Douglas	Operations Engineer	LC 34, outside aft inter-stage of Launch Vehicle
Batts, Bruce H.	PAA	Crew Chief, Fire Dept.	PAA Fire Station
Beavan, Harry E.	PAA	Elevator Technician	LC 34, Ground Level Umbilical Tower
Bilbrey, H.F.	PAA	Sgt. Security Police	LC 34 Level A-4
Blankenship, James R.	PAA	Fireman	PAA Fire Station
Bohlmann, R.R.	NASA/KSC	Communications Engineer	ACE Control Room 1 MSO
Brandon, R.E.	NAA	Power and Sequential Engineer	ACE Control Room 1 MSO
Bruckner, H.P.	Bendix	Manager, Support Branch	Unknown
Cain, James L.	NASA/KSC	QC Inspector	LC QC Trailer
Caris, Robert D.	NAA	Technician	LC 34 1st Level
Colevell, William E.	NAA	Technician	Home
Creighton, Henry C.	NASA/KSC	Project Engineer	VIP Room of Control Room 1 MSO Building
Darnell, Burnard E.	PAA	Security Police	LC 34 Main Gate
Dawes, Benny L.	PAA	Fireman	PAA Fire Station
Dike, J.L.	Douglas	Propulsion Engineer	LC 34 inside SIVB Aft Inter-stage

Fannin, Lionel E.	NASA/KSC	Mechanical Engineer	LC Blockhouse Console 8A
Fultz, James D., Jr.	NAA	Spacecraft Technician	LC 34 Level A8 at Ingress
Gallagher, Martin E. Dr.	PAA	PAA Doctor	PAA Cape Dispensary
Goodwin, Gewin H.	NAA	Technician	LC 34 - Level 7
Gorman, George W.	Chrysler	Q C Inspector	LC 34 Level A4
Gornto, Jack P.	PAA	Asst. Chief Fire Department	PAA Fire Station
Guidry, Mark	NASA/KSC	Electrical Sequential Systems Engineer	ACE Control Room 1 MSO
Hanna, Paul R.	PAA	Fireman	PAA Fire Station
Hennigan, Thomas R.	PAA	Security Policeman	LC 34 Ground Level West Side
Hinton, J.H.	Bendix	Manager, Propellant Syst. Component Dept.	Laboratory
Hipp, W.L.	PAA	Chief, Fire Department	Home
Hughes, Maynard S.	PAA	Supervisor	LC 34, Umbilical Tower 70' Level
James, George H.	NASA/KSC	Q C Inspector	Ground Level of Launch Structure
Jennings, J.B.	Douglas	Engineer Scientist	LC 34 Inside Launch Vehicle aft interstage
Jones, Ronald H.	Chrysler	ECS Technician	LC 34 Service Structure ECS Room
Kincaid, Randal L.	Douglas	Electronic Technician	LC 34 Blockhouse
McMillan, Kenneth C.	PAA	Assistant Chief, Fire Dept.	PAA Fire Station
McMyler, William F.	Bendix	Navigation and Control Test	CIF Building Room 307
Mills, Edmund B., Jr.	Douglas	Electrical Leadman	LC 34 inside Launch Vehicle aft interstage
Minnich, William T., Jr.	NAA	Spacecraft Technician	LC 34 Level A8 at Ingress
Moody, Samuel P., Jr.	NAA	Environmental Control System Supervisor	Office MSO Building
Moore, Dan L.	Douglas	Missile Technician	LC 34 inside Launch Vehicle aft interstage

Neal, Cecil E.	PAA	Crew Chief, Fire Department	Enroute from LC 37 to Fire Station
Olson, R.D.	Douglas	Electronic Technician	LC 34 Inside Launch Vehicle aft interstage
Ostiguy, J.J.	NAA	Communication Engineer	ACE Control Room 1 MSO
Plomer, Milt J.	Douglas	Section Chief, Structural Mechanical	LC 34 Blockhouse
Pride, Jim	IBM	Measuring Technician	LC 34 Blockhouse
Rector, Murray M.	PAA	Fireman	Cruising run crew
Rink, Elmer B.	Bendix	Propellant Sampler	Home
Salyer, Walter D.	NASA/MSC	Suit Technician	LC 34 Trailer
Scarborough, Robert K.	PAA	Pad Safety	N/E Corner of LC 34 Pad Area
Schmyser, Clayton F.	Chrysler	Technician Leadman	LC 34 Service Structure 152-foot Level
Sheeley, Vester	NAA	Weight Engineer	LC 34 Level A8 at Ingress
Sutton, Cernon S.	NASA/KSC	Q C Inspector S-IB	Launch Complex 37
Vallin, Jose	NAA	Electrical Systems Engineer	Office MSO Building
Van Hooser, John C. Jr.	NASA/KSC	Technician-Biomed.	ACE Control Room 1 MSO
Vaughn, Charles M.	NASA/MSC	Engineer, RASPO/MSO	Location Unknown
Warner, Alonzo E.	NAA	Electrical Power Systems Engineer	ACE Control Room 1 MSO
Watts, Wilburn Virgil	Douglas	Inspector, Missile Field	LC 34 inside Launch Vehicle aft interstage
Wilde, Walter L.	Douglas	Electrical Technician	LC 34 inside Launch Vehicle aft interstage
Wisnabaker, Harvey M. Jr.	Chrysler	ECS Technician	LC 34 Service Structure ECS Room
Wright, Edward E. Jr.	NASA/KSC	Environmental Control Systems Engineer	ACE Control Room 1 MSO
Yon, Ted Jr.	NAA	Supervisor Mechanical Systems	White Room during Ingress

D. MISCELLANEOUS

Name	Organization	Position	Location During Accident
Abrams, Robert D.	Chrysler	Launch Operations Inspector	Complex 34 Launcher
Acuna, R.	Chrysler	Launch Operations Inspector	LH ₂ Facility
Adams, John P.	Chrysler	Station Patching/ Oscillograph Monitor	Blockhouse 34, Floor 1
Adrian, Kenneth R.	Chrysler	Measuring System Engineer (RIME)	Blockhouse 34, Rack C-24
Albright, Charles G.	FEC	Technician	Blockhouse 34 2nd Floor EA Recorder 1
Allen, R. H.	PAA	Security Police	LC 34 Blockhouse
Allen, Ronald D.	Chrysler	Quality Surveillance	Complex 34, Vehicle Mech. Off.
Allshouse, Dennis W.	Chrysler	Structure RF Technician	Service Structure, RF Room
Alva, Martin	Chrysler	RF Unit Supervisor	Blockhouse 34, Floor 1
Arlotti, Elio	Bendix	Laboratory Technician	At Home
Arrington, H. M.	Bendix	Technician	At Home
Avery, Charles B.	Chrysler	Support Engineer	Complex 34, Support Bldg.
Ayling, William T.	Chrysler	Launch Branch Inspection Propellant Networks	Complex 34 Inspection Trailer
Baer, John D.	Chrysler	Launch Operations Inspector	Complex 34, PCD
Bailey, James A.	Douglas	Flight Control Engineer	LC 34 Blockhouse
Ball, George D.	NASA/KSC	Technician	At Home
Ball, Melvin B.	Chrysler	Magnetic Tape Recorder Operator	Blockhouse 34, GSE Station
Banks, Samuel B.	Chrysler	Trailing Wire Recorder Operator	Blockhouse 34 C-17

Barkdoll, Milton E.	Chrysler	Monitor Hydraulic Recorders on SIB	Blockhouse 34 Firing Room
Baron, Thomas Ronald	N/A		N/A
Barnes, Harold F.	NASA-KSC	Q C Inspector	LC 34 Blockhouse
Barrow, John M.	NASA/KSC	Q G Inspector	LC 34, LVO Quality Trailer 254
Bassett, Paul J.	Chrysler	Supporting Test MGSE	Service Structure 17' Level
Bauserman, C. R.	NAA	SPS Engineer	ACE Control 1 MSO
Bayless, D. A.	Douglas	Engineer Scientist	LC 34 Blockhouse
Beagley, Richard C.	Bendix	Systems Safety Supervisor	Left Complex for Dinner
Beale, W. David	NASA/KSC	Instrumentation Engineer	LC 34 Computer Room
Böcker, Donald E.	Bendix	Chemist	Lab. Building H5-994
Bedsole, H. D.	NAA	Technician	LC 34 188-foot Level
Bell, C. H.	IBM	BUTM Oscillograph	Blockhouse 1st floor RF station
Bennett, John	Douglas	Branch Chief	LC 34 Operations Office
Benton, Edward G.	Bendix	Technician	South Center side of 4th adjustable level (34)
Benziger, Ernest T.	Chrysler	Launch Operations Inspector	Complex 34, ECS Bldg.
Bielling, R.	IBM	AGCS Stabilizer Panel Monitor	AGCS
Birch, Ken W.	Douglas	Associate Supervisor	LC 34, Operations Office
Bitterling, M. D.	Douglas	Group Engineer	LC 34 Blockhouse
Blocher, Richard H.	Bendix	Foreman	Bldg. 3-66220 (Cape)
Bolster, Donald T.	Chrysler	Work Order Control	Complex 34, Trailer 169
Bond, Raymond H.	Chrysler	Chrysler Test Office	Complex 34, Support Bldg.
Boot, Clifford O.	Chrysler	Group Leader, Technical Documentation Unit	Complex 34, Support Bldg.
Borland, Thomas	IBM	Mechanical Systems Technician	LC 34, Mechanical Trailer 641

Braun, James E.	Bendix	Quality Assurance Technician	Complex 34/37
Bouwsma, William J.	Chrysler	DEE-6	Blockhouse 34, Floor 2
Brecken, E. R.	Douglas	Engineer Hydraulics Panel Operator	LC 34 Blockhouse
Bryan, Frank	NASA/KSC	Electrical Engineer	LC 34 Blockhouse
Bretzius, Edward D.	Chrysler	Vehicle Measuring Unit Supervisor	Service Structure, Measuring Station
Brewer, Charles W.	PAA	Security Police	LC 34, 27-foot level of Service Structure
Brown, Donald L.	Chrysler	Field Technician in MSAU	Complex 34, Support Bldg.
Brown, Julius	Chrysler	Battery Attendant	Complex 34, AGCS
Bruce, David L.	Bendix	Propellant Sampler	At Home
Buchanan, D. E.	IBM	Stabilizer Panel Monitor	LC 34, Rack B57, Stabilizer
Bumgardner, Albert	NAA	Mechanical Technician	LC 34, Service Structure Elevator, bottom
Burke, Edwin L.	Chrysler	Engineer, S1B Airborne Networks	Service Structure, Floor 2
Burlington, D.	IBM	Technician	LC 34, AGCS
Burmeister, Gerald A.	Douglas	Propulsion Engineer	Umbilical Tower, 100-foot Level
Burns, Robert	FEC	Technician	At Home
Byers, Andy	Douglas	Mechanical Technician	LC 34, Umbilical Tower, 10th Level
Byrd, Herman C.	NAA	Technician	ACE Control Room 2, MSO Building
Byrd, William R.	Bendix	Systems Safety Supervisor	Complex 37
Call, John E.	Chrysler	Launch Crew Manager	Blockhouse 34, VIP Room
Carlson, Norman M.	NASA/KSC	SI Test Operations Branch Chief	LC 34, Blockhouse Firing Room, Console A-12
Carlson, R. D.	Douglas	Electronics Propulsion Coordinator	LC 34, Blockhouse, 4B Firing Room
Carnes, Thomas H.	Chrysler	AGCS Networks Engineer (AINW)	Blockhouse 34, Power Racks

Carnley, Macey H.	Chrysler	Special Systems	Complex 34, Support Bldg.
Carpenter, Warner H.	Chrysler	Q C Inspector	Service Structure, 152-foot Level
Cesare, Donald E.	Douglas	Lead Man Mechanic	LC 34, SS, 116-foot Level
Chaille, William N.	Bendix	Technician	At Home
Chaitoff, Milton	Chrysler	DRSC GSE Ground Station	Blockhouse 34, Floor 1
Chambers, Milton	NASA/KSC	Chief, Gyro and Stabilizer Systems Branch	CIF Building
Charvet, Andre John	Douglas	Technician	LC 34, SS, OAT Room
Clements, R. D.	NASA/KSC	Engineer	LC 34, Support Bldg., Room 129
Clifford, Harold S.	Douglas	Engineer Scientist	LC 34 Blockhouse
Cobrin, R.	IBM	Technician	LC 34, Stabilizer System B56
Collier, J. G.	FEC	Shift Supervisor	CIF Building, Room 297
Collins, William C.	Douglas	Electronics Technician	LC 34, SS, Measuring Station
Comptom, R. L.	IBM	Technician	LC 34, Ground Computer. AGCS
Conner, R. P.	Douglas	Associate Engineer	LC 34 Blockhouse
Conrad, Harold E.	Chrysler	Engineer	Complex 34, DEE-6
Cook, Ross L.	IBM	BUTM FM FM System Monitor	LC 34, BUTM FM/FM Monitor
Cooley, Dudley M.	Chrysler	Standby Relief Operator, Firing Room	Complex 34, Support Bldg.
Correll, Carl C.	Chrysler	Field Technician (Valve Lab)	Complex 34, Support Bldg.
Cortez, Romo V.	NASA/KSC	Telemetry Technician	LC 34, Blockhouse TM Ground Station
Cottingham, Robert R.	FEC	ECS Measuring Monitor	Blockhouse 34, Rack G54
Cressman, John H. P.	NASA/KSC	Q C Inspector	LC 34, Trailer-1-254
Crosswell, A. L.	NASA/KSC	Measuring Engineer	Service Structure Measuring Station

Cuchens, James K. Jr.	Bendix	Life Support Technician	South Center of 4th Adjustable Level (Complex 34)
Dahlgren, Richard S.	Douglas	Checkout Engineer	LC 34 Blockhouse
Dasse, H. D.	PAA	Security Police	Security Headquarters
Dean, John O.	Bendix	Propellant Mechanic	Spaceline Shop - Complex 34
Dearth, Alfred E.	Chrysler	Vehicle Inspection Supervisor	Complex 34
Demco, Alan	NASA/KSC	Instrumentation Technician	LC 34, Blockhouse, DDAS Ground Station
DiGiorgio, George R.	Chrysler	Pneumatics System Engineer GSE	Complex 34, AGCS
Dobbs, Bruce S.	Douglas	Group Engineer, Electronics	LC 34 Blockhouse
Drott, Art G.	Douglas	Engineer Scientist	LC 34 Blockhouse
Dryden, Guy	IBM	Technician	CIF Building, Room 307
DuPriest, W. R.	Bendix	Acting Foreman	At Home
Durnin, Chester W.	Chrysler	S1B Vehicle Instrumentation Measuring Engineer	Service Structure, Measuring Station
Dybeveck, Lowell H.	Douglas	Associate Engineer/Scientist	CIF Building
Ebbert, Carl S.	Chrysler	Launch Operations Inspector	Complex 34, Support Bldg.
Edgar, Lawrence A.	Chrysler	Simulated Propellant Loading, LON System	Blockhouse 34, LON Racks
Edlund, L. R.	Douglas	Engineer/Scientist	LC 34 Structural Mechanical Trailer
Elder, J.	IBM	Technician	LC 34, IU Doorway
Edmunds, Edward C., Jr.	Chrysler	ESE Measuring Unit Supervisor	Blockhouse 34, C-19
Ellis, W. P.	IBM	Technician	LC 34, Blockhouse 1st Floor, Ground Computer
Ely, George W.	NASA/KSC	Guidance and Control Technician	CIF Building, Room 307

Evans, Ralph M.	Chrysler	Launch Operations Inspector Unit Supervisor	Complex 34, Trailer 1-069
Evans, Raymond T., Jr.	NASA/KSC	Propulsion and Mechanical Technician	LC 34, Level A-4
Evitt, Johnnie E.	Bendix	Operator of O ₂ Conditioning System	At Home
Evjen, J.	IBM	Technician	LC 34, Blockhouse, 1st Floor, Ground Computer
Fairman, J. W.	NAA	Technician	LC 34, Level A-6
Fickey, Edsel W.	Bendix	Chief Chemist	At Home
Ford, Francis B.	Bendix	Quality Assurance Technician	At Home
Forknall, George	Bendix	High Pressure Mechanic	At Home
Foster, J. S.	PAA	Pad Safety Supervisor	At Home
Fox, Beecher, H.	Chrysler	Electrician	Complex 34, ECS Breaker Control Room
Fredlock, Armistead III	NASA/KSC	Telemetry Technician	LC 34, Blockhouse, DDAS Area
Freeze, Daniel S.	Douglas	Engineer/Scientist	LC 34 Douglas Electronics Trailer
Fritz, Richard J.	Douglas	AGCS Technician-Guidance Control System	LC 34 AGCS
Frost, J. C.	General Elec.	Quality Control Specialist	Operations Mobile Trailer Located South of the Blockhouse
Furr, Glynn R.	Chrysler	Operator & Monitor TM Receiving Equipment	Blockhouse 34, TM Checkout Station
Galasso, Vincent F.	Chrysler	Vehicle Networks Electrical	Service Structure, 27-foot Level
Gavazzi, Trent D.	Chrysler	Senior Systems Launch and Test Engineer	Service Structure, 27-foot Level
Gay, John B.	Chrysler	Launch Technician Field Supervisor	Complex 34, Support Bldg.
Gerard, Jerry	Douglas	Engineer/Scientist	LC 34, Douglas Electronics Trailer

Gibbons, Thomas D.	Chrysler	AGCS Networks Engineer (AINW)	Complex 34, Launcher
Gibson, John H.	Chrysler	Pull Trailing Wire Measurements Cable After Liftoff +5 Seconds	Complex 34, AGCS Bldg.
Givens, Charles	Bendix	Electronic Technician	Complex 37 Storage Battery
Glusing, W. H.	NASA/KSC	Instrumentation Engineer	ACE Control Room 1, MSO Building
Goard, Garnett D.	Bendix	Propellant Sampler	LAB Building H5-995
Goodwin, Gilbert D.	Chrysler	Monitor AI Engine Actuators During Hydraulic Runs	Service Structure
Gordon, Eleanor L.	PAA	PAA Nurse	PAA Cape Dispensary
Gorrell, Gene P.	Chrysler	Senior Systems Engineer, Launcher & Firing Accessories	Service Structure, 27-foot Level
Graboski, Diana L.	Chrysler	Systems Design Clerk	Complex 34, Support Bldg.
Graham, Ira F., Jr.	Chrysler	Engineer, S1B Airborne Networks	Service Structure, Level 2
Gray, Stanley D.	Chrysler	DEE-3	Blockhouse 34, Firing Room
Grenier, Frederick C.	Chrysler	Launch Operations Inspector	Complex 34, Trailer 1-069
Gustafson, Gary F.	IBM	Oscillograph Monitor, BUTM	LC 34, BUTM Oscillograph Monitor
Hacker, Ford	Chrysler	Field Technician Supervisor (MGSE)	Service Structure, 27-foot Level
Hacner, Gordon J.	Chrysler	Operate DRSC Monitor Tape Recorder	Blockhouse 34, Floor 1
Hanson, R. O.	Douglas	Electronics Technician	LC 34 Blockhouse
Harbaugh, Weldon R.	Chrysler	Unit Supervisor, Launcher & Firing Accessories	Service Structure, 27-foot Level
Harms, Eugene H.	Chrysler	LO2 Systems Engineer	Blockhouse 34, Console 17
Harman, Joseph F.	Chrysler	Stock Man	Complex 34, Support Bldg.
Hartman, William L.	Chrysler	AGCS Power Technician	Blockhouse 34, Power Racks & PCD

Hawk, Larry A.	Chrysler	Technician/PCD	Blockhouse 34, PCD Area
Hayes, Oliver B.	PAA	Security Police	LC 34, Main Gate
Hayes, Raymond E.	PAA	Security Police	LC 34, Rest Room
Haynes, Bill L.	NASA/KSC	Electrical Systems Engineer	LC 34, Blockhouse
Hazelton, James T.	Chrysler	CITC Backup	Complex 34, Support Bldg.
Heinbaugh, James R.	Chrysler	LH ₂ Technician	Blockhouse 34, LH ₂ Facility
Heinmiller, Walter R.	FEC	ECS Technician	Complex 34, AGCS
Heins, Don	IBM	Backup Test Conductor	LC 34, Support Bldg, Room 117
Hennig, Robert L.	Chrysler	Measuring System Technician	Service Structure, Floor 2
Heuss, Edward E.	Douglas	Electronic Technician	LC 34 Blockhouse
Hillman, Harry E., Jr.	Chrysler	S1B Telemetry Monitor	Blockhouse 34, Floor 1
Hinkle, R. R.	IBM	Technician	LC 34, Vehicle Networks Office, 2nd Floor
Hoblitzell, Wm. Roy, Jr.	Bendix	Propellant Mechanic	Spacecraft Line Shop - Complex 34
Hoeweler, Harold H.	Chrysler	Field Technician	Service Structure, A-1 Level
Hogston, Wm. Charles	Bendix	Propellant Sampler	Complex 34/47
Hoisington, Robert E.	Chrysler	Monitor S1 Engine Movement During Test	Service Structure
Holland, D. L.	A.C. Electronics	Guidance & Navigation System Engineer	MSOB/ACE Control Room 1
Holmes, Earle C., Jr.	Chrysler	Technician, Propellant Tanking Computer	Complex 34, Support Bldg.
Hopfinger, James L.	NASA/KSC	Quality Control	Service Structure
Hopkins, Robert L.	Chrysler	LO ₂ Technician	Complex 34, LOX Trailer
Hopper, U. E.	Bendix	Technician	At Home
Householder, LeRoy W.	Douglas	Electronics Engineer	LC 34 Blockhouse
Howard, J. Ron	Chrysler	Telemetry GSE Operations	Blockhouse 34, Floor 1

Howell, Harold V., Jr.	NAA	Technician	LC 34, Level A-6
Hubble, E. E.	NASA/KSC	Pneumatics Technician	LC 34, Trailer 148
Hughes, K. L.	Douglas	Technician	LC 34 Blockhouse
Hughes, W.	NASA/KSC	LOX Area Inspector	LC 34, LOX Trailer
Hunter, H. D.	NASA/KSC	IU Technician	LC-37
Hutchinson, Bertie O.	Chrysler	Recorder Monitor	Blockhouse 34, Firing Room -
Iniestra, P. O.	GE	ACE Monitor Equipment	LC 34 Blockhouse, 1st Floor
Jackson, Richard F.	Bendix	Special Pneumatics High Pressure Gas Mechanic	At Home
Jacobs, Thomas W.	Chrysler	Support S1B Telemetry Checkout	Complex 34, Trailer 2-045
Jensen, Gerald L.	Chrysler	Project Technician	Complex 34, Trailer 847
Jewell, W. O.	NASA/KSC	Electrical Technician	LC 34
Johnson, Frank O.	GE	Computer Maintenance Specialist	Computer Room 1, MSO Building
Johnson, French E.	NASA/KSC	Electrical Technician	LC 34, Blockhouse
Johnson, Robert W.	Chrysler	QC Surveillance	Service Structure, Measuring Station
Johnson, William A.	Douglas	Electronic Technician	LC 34, Service Structure 27' Level
Jones, C. W.	Chrysler	S1B Stage Electrical Networks Engineer	Service Structure, Floor 2
Jones, Lawrence D.	Bendix	Technician	Titusville Fishing Pier
Joslin, John J.	Chrysler	Monitoring ODOP Ground Station	Blockhouse 34, Floor 1
Joyner, A. L.	NAA	Instrumentation Engineer	ACE Control Room 1, MSO Building
Kaminski, Leonard T.	Chrysler	Launch Operations Group Supervisor	Complex 34, Trailer 1-069
Kammerude, Stanley D.	Chrysler	RP-1 Technician	Complex 34, RP-1
Karli, Richard O.	Douglas	Lead Engineer-SIVB	LC 34 Blockhouse
Keefe, John J.	Douglas	Associate Engineer/Scientist	LC 34, Service Structure Aft Interstage

Keever, N.	IBM	Technician	LC 34, 124 Stabilizers, Rack B55
Kelley, Donald E.	Bendix	Supervisory Engineer, System Safety Support Department	At Home
Kenny, B.	IBM	Technician	LC 34, Blockhouse, 1st Floor
Kiernan, John	Bendix	Systems Safety Supervisor	At Home
King, John W.	FEC	Technician	CIF Building, Room 297, TM Station
King, Joseph J.	NASA/KSC	Planning Technician	LC 34, Blockhouse
Kirby, R. G.	IBM	Technician	CIF Building, Room 307
Kitchens, T. R.	IBM	IU Ground Electrician	LC 34
Koby, Raymond	Chrysler	Telemetry TRS-1 Station	Blockhouse 34
Koivu, Ray A.	Chrysler	GSE Mechanical Technician	Service Structure, A-1
Kubasko, James	NASA/KSC	Quality Surveillance	LC 34, Service Structure
Lambert, Walter A.	Chrysler	Turn-Off Circuit Breaker	Complex 34, AGCS Area
Lambert, William F.	Bendix	Propellant Mechanic	In Shop - Complex 34
Langston, Gerald R.	FEC	Technician	CIF Building, Datacore Module
Lane, R. E.	PAA	Security Police	Security Headquarters
Laudermilch, Ray H.	NASA/KSC	Telemetry Technician	LC 34, Blockhouse
Lec, Robert E.	NASA/KSC	Instrumentation Technician	LC 34, Office Trailer
Lemmon, Floyd C.	Chrysler	Pneumatics Control System Technician	Complex 34, PCD Area
Lewis, J. E.	IBM	IU Complex Manager	LC 34, 2nd Floor
Lewis, John D.	Bendix	System Safety Supervisor	Driving in Cocoa Beach, Fla.
Lewis, William K.	NASA/KSC	Technician	LC 34 Blockhouse
Lewis, Richard W.	Chrysler	Q C Inspector	Service Structure, A-1

Long, R. G.	NASA/KSC	Chief, Planning & Technical Support	LC 34 Blockhouse, VIP Room
Luke, Rodney C.	Douglas	Mechanic	LC 34, Umbilical Tower, 110-foot Level
Mack, C. J.	PAA	Security Police	At Home
Mahoney, Richard H.	Chrysler	Pneumatics Technician	Complex 34, PCD Area
Maki, Paul W.	Bendix	Propellant Mechanic	At Home
Malkemes, R. F.	Bendix	Senior Engineer, Special Pneumatics Facility, High Pressure Gas Dept.	220-foot Level of Complex 34, Umbilical Tower
Mann, Richard C.	Chrysler	Monitor S1B Telemetry Data	CIF Telemetry Station
Martin, John D.	Bendix	Quality Assurance Technician	Spacecraft Lines Office Complex 34
Martin, John D.	Chrysler	S1B RF/TM System Engineer	Blockhouse 34, Floor 1
McCarthy, Daniel J.	Bendix	Quality Assurance Technician	At Home
McEachern, Charles A.	NASA/KSC	Propulsion and Mechanical Technician	CIF, Room 307
McMechen, Margaret A.	PAA	PAA Nurse	At Home
McRae, Walter LeRoy	Bendix	Propellant Sampler	Driving in Cocoa Beach, Fla.
Meisch, John A.	Chrysler	Assisting Senior Engineer/Test Box	Service Structure, 27-foot Level
Mellott, Douglas W.	NASA/KSC	Guidance and Control Technician	CIF
Miner, James W.	Chrysler	Support Telemetry Checks	Service Structure, A-1
Merrill, K. R.	PAA	Chief, Security Police	At Home
Mook, Gerald L.	Douglas	Lead Engineer/Vehicle Systems	LC 34 Blockhouse
Moors, Dave	IBM	Technician	LC 34, RUBM, Rack C-7
Morrison, Joseph E.	Bendix	Propellant Sampler	Winter Garden, Florida
Muldoon, Raymond	Douglas	Missile Field Checkout Technician	LC 34 AGCS

Mullin, J. T., Jr.	NASA/KSC	Electrical Systems Engineer	LC 34
Munson, Harry G.	Douglas	Supervisor Manufacturing Operations	LC 34 Operations Room
Muys, Paul	RCA	Communications Technician	MSO Bldg. Room 4440
Nadeau, Robert T.	Chrysler	Technician, Vehicle Measuring Station	Service Structure
Nicholson, John L.	PAA	Security Police	Road at N.E. Corner of LC 34
Niedert, Myron A.	Douglas	Engineer	CIF Building, Room 307
Norvell, G. C.	Douglas	Structural Mechanical Engineer	CIF Building
Oberlin, Donald	Chrysler	S1B Hydraulic Pnl. Operator	Blockhouse 34, Rack 44
O'Brien, J. J.	IBM	Technician	LC 34, OAT Room 1521 Level
O'Hara, A. D.	NASA/KSC	LV & Test Ops. Mgr., Saturn 1B	LC 34 Blockhouse
Olsen, Stanley	Chrysler	Supervisor, S1B Vehicle Telemetry	Blockhouse 34, Floor 1
O'Neal, E. H.	Douglas	Mechanical Leadman	LC 34, Mechanical Trailer
Otto, William E.	Douglas	Associate Engineer	LC 34, Service Structure OAT Room, 152' Level
Overstreet, Clyde F.	NASA/KSC	Electrical Systems Engineer	LC 34, Blockhouse
Overton, T. L.	Douglas	Engineer Draftsman	LC 34, Service Structure, 114-foot Level
Parker, Sanford	Douglas	Missile Mechanic	LC 34, Service Structure, 116-foot Level
Payne, W. D.	Douglas	Inspector	LC 34 Blockhouse
Pearson, Charles A.	Bendix	Propellant Sampler	Lab Bldg. H5-995
Penovich, F. R.	NASA/KSC	Guidance & Control Technician	LC 34, Support Bldg.

Perry, William	IBM	Technician	LC 34, Blockhouse RUCP Console
Phyllis, Howard L., Jr.	Bendix	Propellant Sampler	At Home
Pigg, Robert W., Jr.	GE	Computer Maintenance Specialist	Computer Room 1, Bldg.
Pipher, Marvin	Douglas	Lead Engineer - TM & RF	LC 34 Blockhouse
Pirtle, James E.	Bendix	Lab Technician	Lab. Bldg. H5-995
Pittman, William E.	Chrysler	OAT Battery Room	Service Structure, 116-foot Level
Platt, Philip C.	Chrysler	Launch Operations Inspector	Complex 34, AGCS
Ploski, B. T.	IBM	Technician	CIF Building, Computer Room 231
Pomeroy, Norman O.	Chrysler	Lab Technician	Complex 34, Support Bldg.
Pornovets, Michael	Bendix	Propellant Sampler	At Home
Porter, Earl G.	FEC	Tape Recorder Operator	Operating Tape Recorder
Powers, Tim L.	Chrysler	LOX Technician	Complex 34, LOX Trailer
Puckett, Paul E.	Chrysler	Support GSE Operations	Service Structure, 17-foot Level
Rainey, C. R.	IBM	Technician	LC 34, Flight Control Rack B47
Raley, E. O.	NASA/KSC	Instrumentation Engineer	LC 34, Service Structure
Reynolds, E. A.	NASA/KSC	G & N Engineer	ACE Control Rm/MSOB
Ricci, P. A.	Douglas	Senior Engineer-Launch Operations	LC 34, Operations Office
Richards, Charles W.	Chrysler	Mechanical Support	Service Structure, 27-foot Level
Richards, Jerry L.	Bendix	Special Pneumatics, High Pressure Gas Mechanic	At Home
Richards, Ronald F.	Bendix	Technician	At Home
Richardson, F. G.	GE	Project Engineer	Unknown
Rickert, James D.	Chrysler	Monitor Umbilical Housing Eject	Service Structure, A-1
Riddle, Albert L., Jr.	PAA	Security Police	LC 34, Blockhouse

Ridlehoover, J. O.	Bendix	Safety & Security Supervisor	At Home
Ries, Edward E.	Chrysler	Digital Range Safety Ground Station	Blockhouse 34, Floor 1
Ritchie, A.	IBM	Technician	Theodelite Hut-124 Systems
Robelen, Kenneth F.	GE	Quality Control Specialist	MSO Building, ACE Stations 1 & 3
Roberts, Wayne Elton	FEC	Magnetic Tape Recorder Operator	CIF Building, Module II
Robinson, Wilbert L.	Bendix	Systems Safety Supervisor	At Home
Rogers, Perry M.	NASA/KSC	Measuring Branch Technician	LC 34, Blockhouse
Rouse, Carroll R.	NASA/KSC	Electrical Systems Engineer	LC 34, Blockhouse
Rowe, D. O.	NAA	Technician	LC 34, 100-foot Level S. E. of gantry
Ruch, Herbert E., Jr.	Bendix	Engineering Specialist	At Home
Rudasill, Charles H.	Bendix	Foreman	Complex 39A
Rush, Russell D.	Chrysler	LH ₂ Technician	Complex 34, LH ₂ Facility
Russell, Orlando L.	Chrysler	System Test & Launch Engr. Supv.	Complex 34, PCD Area
Ryder, Barry A.	Bendix	Propellant Sampler	At Home
Sales, Amos H.	Chrysler	Launch Operations Inspector	Complex 34, Liquid Oxygen Fac.
Sample, Carl W.	GE	Decommuration Maintenance Specialist	MSO Building, Computer Room 1
Samples, Robert E.	Bendix	Laboratory Supervisor, Gas Analysis Lab	At Home
Sanders, William M.	Chrysler	Technician, PREV	Blockhouse 34
Santos, Tomas	IBM	Technician	LC 34, Rack B-53 Computer Console
Sapp, L. A.	Douglas	Electronics Technician	LC 34, Service Structure, Forward Interstage
Satterfield, Walter D.	Chrysler	Field Technician	Complex 34, Valve Lab

Sawyer, Arthur L.	NASA/KSC	Electrical Systems Engineer	LC 34
Schlaefter, Bryant C.	Bendix	Propellant Mechanic	At Home
Schoultz, P. A.	NAA	Stabilization & Control	ACE Control Room 1, MSO Building
Shackelford, David A.	Chrysler	RF Technician	Service Structure, A-1
Shoaf, Joseph M.	Chrysler	Recorder Operator Monitor	Blockhouse 34, Firing Room
Secor, Ray L.	Douglas	Mechanical Technician	LC 34, Service Structure, 116-foot Level
Shockley, R. L.	Douglas	Electronics Test Technician	LC 34, Service Structure, 116-foot Level
Short, Jack	NASA/KSC	Q C Inspector	LC 34, Service Structure
Shramko, John Jr.	NASA/KSC	Guidance & Navigation Engineer	LC 34, Blockhouse
Shreves, Dolores C.	PAA	PAA Nurse	PAA Cape Dispensary
Sibley, L. F.	Douglas	Electronics Technician	LC 34 Blockhouse
Simon, Marion	Douglas	Chauffeur	Driver/Complex 34, Service Structure, 116-foot Level
Simonelli, R. B.	Douglas	Electronics Engineer	LC 34, Service Structure
Skog, Roy E.	Bendix	Technician	At Home
Sonnenthal, William L.	Chrysler	Engineer	Service Structure, 17-foot Level
Spiller, Henry W.	Chrysler	Launch Operations Inspector	Service Structure, A-2
Solo, Dennis	IBM	Technician	LC 34, Rack B-51 Flight Computer
Staveland, Allen R.	Chrysler	Field Engineer	Complex 34, Support Bldg.
Stelly, J. N.	NASA/KSC	Stabilization & Control Systems Engineer	ACE Control Room 1, MSO Building
Stewart, David D.	Chrysler	SIFC S1B Flight Control Engineer	Service Structure
Stubbe, R. E.	Douglas	Associate Engineer Scientist	At Home

Sudimak, Basil	Bendix	HPG Mechanic	At Home
Szot, Ronald D.	Bendix	Propellant Sampler	At Home
Tatham, Steve	NASA/KSC	Standby Van Driver	MSO Building
Taylor, Edwin R.	GE	Test Operations Engr.	Office, MSO Building
Taylor, P.	IBM	Technician	LC 34, AGCS
Terry, Marvin E.	Chrysler	Senior LC 34 Meas. Sta. Engineer	Service Structure, Meas. Sta.
Theobald, P. O.	IBM	Manager, Measuring & Telemetry Systems	LC 34, Firing Room, Ground Networks Panel
Thawley, John H.	Chrysler	Field Technician	Service Structure, Floor 2
Theofrastou, Perry	IBM	Technician	LC 34, Blockhouse
Thibodcaux, Albert W.	Chrysler	Engineer, Airborne Net- works	Service Structure
Thomas, J. L.	FEC	Technician	CIF Building, Module 2 Data Core
Thomas, Palmer S.	PAA	Security Police	LC 34, base of Service Structure
Thomason, James R.	Bendix	Technician	Main Gate of Complex 34
Thompson, Arthur L.	Chrysler	Monitor Hydraulic Recorders/S1B	Blockhouse 34, Firing Room
Thompson, John P.	Chrysler	Support S1B Telemetry Checks	Service Structure, A-1
Thomson, J. C.	NAA	Cryo/Fuel Cell Engineer	ACE Control Room 1, MSO Building
Titler, Philip S.	Chrysler	Air Conditioning Technician	Complex 34, ECS
Torrence, Bernard W.	NASA/KSC	Electronics Technician	
Townsend, Larry S.	Bendix	High Pressure Gas Mechanic	GOX Pad, Complex 34/37
Tribe, John	NAA	RCS Engineer	ACE Control Room 1, MSO Building
Tucker, S. S.	NASA/KSC	Instrumentation Systems Technician	LC 34, Blockhouse

Turner, Charles A.	NASA /KSC	Guidance & Navigation Systems Engineer	CIF Building
Turner, Clark C.	Chrysler	Launch Operations Inspector	Complex 34, PCD Area
Tussler, H. R.	Douglas	Engineer/Scientist	LC 34, Service Structure between A-2 & -4 Levels
Tutwiler, C. W.	Douglas	Section Chief, Saturn Electronics	LC 34 Blockhouse
Tzareff, Paul P.	Chrysler	Support Test Operations, MGSE	Service Structure, 17-foot Level
Van Skaik, Albert L.	Chrysler	RP-1 Technician	Complex 34, Trailer (RP-1)
Vozzola, D. B.	IBM	Measuring Systems Engineer	LC 34, Rack C5
Vreeland, Arthur E. Jr.	FEC	Technician	CIF Building, Data core Module 4
Wakefield, Lester S.	Chrysler	Valve Lab Inspection	Complex 34, Support Bldg.
Walden, Gerald B.	NASA/KSC	Vehicle Measuring Technician	LC 34, Service Structure
Walsh, James P.	Bendix	Propellant Sampler	Complex 34/37
Walters, John R.	Chrysler	Propellant Tanking Computer System	Complex 34, Support Bldg.
Walters, Jurd A.	Bendix	High Pressure Gas Mechanic	Complex 34, O ₂ Conditioning Console
Ware, Edward J.	Chrysler	Chemical Cleaning	Complex 34, Support Bldg.
Washburn, J. E.	IBM	Technician	LC 34, Rack B-52
Watson, James R.	Chrysler	AGCS Ground Networks	Complex 34, AGCS
Wegelin, Wendell	Chrysler	Quality Surveillance	Service Structure, A-1
West, Edward L.	NASA/KSC	Q C Inspector	At Home
Whiteside, C. A.	NASA/KSC	Guidance & Navigations Systems Engineer	CIF Building, Room 307
Whiting, Donald F.	NASA/KSC	Q C Inspector	ACE Control Room 1, MSO Building
Whitson, James T.	Chrysler	Support Plugs-Out Test	Complex 34

Whitt, William B.	Chrysler	Pneumatics System Engineer	Complex 34, AGCS
Williams, Arthur J.	Bendix	System Safety Supervisor	School PTA Dinner
Williams, Carl M.	Bendix	Technician	Main Gate, Complex 34
Williams, Terry A.	Bendix	Propellant Mechanic	At Home
Williamson, E. L.	Bendix	Supervisory Engineer, PSCL Dept., Analytical Laboratory	At Home
Wilson, Dwayne W.	Douglas	Missile Field Test Technician	LC 34, Service Structure, 116-foot Level
Wilson, James C. Jr.	Chrysler	Launch Oprs. Insp. Unit Supv.	Complex 34, Trailer 1-069
Winborn, J. E.	IBM	Technician	LC 34, Blockhouse 1st floor, Ground Computer
Wise, Harry E.	Douglas	Missile Mechanic	LC 34, Service Structure Structure, 116-foot Level
Woodson, Mason C.	Chrysler	S1B Vehicle Electrical Networks	Service Structure, Floor 2
Wright, Roger N.	Bendix	Laboratory Technician	At Home
Wybranowski, Edward W.	Chrysler	LH ₂ Panel Operator	Complex 34, LH ₂ Auto Load Panel
Yeary, James R.	Douglas	Associate Engineer Scientist	At Home
Young, W.	IBM	Technician	LC 34, Flight Control Room Rack B45

COMMON ABBREVIATIONS AND DEFINITIONS

ACE	Acceptance Checkout Equipment
AFET	Facility Electrical Technician - (CALL SIGN) (AGCS Room)
AGCS	Automatic Ground Control System
APDS	Power Distribution System - (CALL SIGN) (AGCS Room)
B/H, BH	Blockhouse
BPC	Boat Protective Cover
CAST	Astronauts Communications Console - (CALL SIGN)
CIF	Central Instrumentation Facility
C/M	Command Module of the Spacecraft
Comm	Communications and Radio Frequency
CPX	Complex
CSTC	Spacecraft Test Conductor - (CALL SIGN)
CVTS	Space Vehicle Test Supervisor - (CALL SIGN)
ECS	Environmental Control System
EDS	Emergency Detection System
G & N	Guidance and Navigation
GSE	Ground Support Equipment
IDR	Interim Deviation Report
INST	Instrumentation and Telemetry
LC	Launch Complex
LCC	Launch Control Center
LES	Launch Escape System
MILA	Merritt Island Launch Area (now Kennedy Space Center, KSC)
MRCS	Reaction Control System - (CALL SIGN)
NAA	North American Aviation, Inc.

NASA	National Aeronautics and Space Administration
OCP	Operational Checkout Procedure
OIS	Operational Intercommunications System
OTV	Operational Television
PA or P/A	Public Address System
PAA	Pan American World Airways, Inc.
P&S	Power and Sequential
PL or P/L	Pad Leader
PLSS	Portable Life Support System
QC	Quality Control
RCS	Reaction Control System
RF	Radio Frequency
S/C	Spacecraft
SCS	Stabilization and Control System
SCET	Command Module Electrical Technician (Service Structure) (CALL SIGN-A8)
SCMD	Command Pilot - (CALL SIGN)
SCMT	Command Module Mechanical Technician (Service Structure) (CALL SIGN-A8)
SFDS	Fluid Distribution System (Service Structure) (CALL SIGN-A7)
SLA	Spacecraft/Lunar Module Adapter
S/M	Service Module
SPAD	Pad Leader - (CALL SIGN)
SPLT	Pilot - (CALL SIGN)
SPS	Service Propulsion System
SSET	Service Module Electrical Technician (Service Structure) (CALL SIGN-A7)
SSRP	Senior Pilot - (CALL SIGN)

STC	Spacecraft Test Conductor
T/C, TC, T.C	Test Conductor
TM	Telemetry
TPE	Test Project Engineer
T SUPER	Test Supervisor
UFET	Umbilical Tower Facility Electrical Technician
VOX	Voice Transmission
W/R	White Room

DONALD O. BABBITT

NAA

JANUARY 28, 1967

I was stationed at the Pad Leader's desk, verifying that per the procedure, support was ready for umbilical pull at T-0. The time period in here I can only estimate as 5 to 15 seconds. I heard on the head set (Channel Black-3) Mr. Chaffee say, "There is a fire in here," (or words to this effect). I ordered the mechanical lead man, Mr. Gleaves, to "Get them out of there" (meaning remove the hatches and get the crew out of the Command Module). I started to turn toward the Communications Box (on my left), when out of the corner of my eye, I saw flame come out from under the boost near the steam duct. I almost completed my turn when I was hit by a concussion or sheet of flame (I don't remember hearing an explosion) and was pushed toward the communication boxes. My next thoughts were to get out of there. (I never had time to notify the blockhouse). I went to the umbilical (White Room) arm, and went across it to the umbilical tower where I encountered three of the spacecraft mechanics and an elevator talker who had a head set. I told the talker to inform the test supervisor that we were on fire and that I need firemen, ambulances, and equipment. With the three mechanics (Messrs. Gleaves, Hawkins, and Clemmons) we grabbed the only CO₂ bottle available and went back to the White Room to try to remove the hatches. The smoke and heat was so intense that we could only spend a short time in the White Room (possibly 1-2 minutes). After several trips back and forth Mr. Gleaves almost passed out due to smoke inhalation so I ordered him to stay out, which he did but for only a short time.

After the smoke had cleared some, I could see that the Spacecraft Technicians and Quality Control (NASA and NAA) had been able to get back into level A-8 and were fighting fires with everything available, so I got some more men and continued as best we could (because of the smoke and heat) to remove the hatches. We attempted to both remove the inner hatch or lower the hatch down inside the Command Module. We were not successful in removing the inner hatch and could only lower the hatch about 75 to 80% of the way because of obstructions. I was at that time only able, again because of the smoke which was considerable, to observe only two of the flight crew but could not recognize who it was. The inner hatch was extremely hot and we could only handle it with the handles attached to the hatch. My observation at the time of hatch removal was that the flight crew were dead and that the destruction inside the Command Module was considerable. After informing the test supervisor of what I had observed (while adhering to security guidelines wherever possible) and continued to direct the crew in putting out the fires. I asked the senior Pan American firemen to specifically check the Launch Escape Motor for hot spots and general heat.

I was relieved by Mr. Curatolo, NAA 1st shift pad leader.

I proceeded down the umbilical tower elevator, met the two NASA doctors and briefed them on what they would find. I then proceeded to the Pan American Dispensary, with a short stop at the NAA Shop Trailer, for treatment and checkup. I was treated for smoke inhalation, flash burns, and eye irritation, and ordered to remain overnight.

I feel that the Spacecraft Crew (Technical, Mechanical, NAA Quality Control, and NASA Quality Control) performed commendably well in this emergency.

I feel that there should be a number of things taken care of immediately by safety from the standpoint of working crew and Equipment Safety.

/s/ Donald O. Babbitt

JANUARY 29, 1967

WILLIAMS:

The Pad Leader is on the upper level by the spacecraft. He is more or less in charge of pad operations. He reports back to the blockhouse and who in turn reports back to the control room where the test is being run from. The test is run from the blockhouse and the control room is back here in this building. He was taking direction from the blockhouse or the North American project engineer who is back here. The activities up there fall under his responsibility.

PETRONE:

Where would you want him to sit or speak from the microphone? Put him there next to you, Dr. Thompson.

THOMPSON:

One thing I think we should say is that the statement that you make will remain in the same -- leave yourself in the same category in keeping all this testimony within the same restraints that have operated up to now. The fact that you have talked to us doesn't relieve you of that obligation.

BABBITT:

I understand perfectly.

PETRONE:

We cannot hear you.

BABBITT:

I have a hoarseness because of smoke damage, so I ask if I can move a little closer. May I speak freely or

THOMPSON:

Go ahead. Tell us what happened, to your observation.

BABBITT:

Well, as the North American pad leader on the 2nd shift, I was stationed at the pad leader's desk. At the time of the incident I was verifying that we were ready at T minus zero for umbilical pull as per the procedures. This is a manual pull and we were checking to make sure all our lines were clear. At the time it had happened, I heard and I can almost definitely state that I believe it was Mr. Chaffee say something to the effect of fire in the command module, fire in the spacecraft, the term fire sticks to me more than anything else. I ordered my mechanical lead man, Mr. Gleeves, to proceed toward the hatch for removing the crew, and started to turn, I was facing the spacecraft. You gentlemen are familiar with the layout up there.

THOMPSON:

We have been there.

BABBITT:

You know where the pad leader's desk is?

THOMPSON:

That the desk with the telephone on it?

BABBITT:

Yes, sir.

THOMPSON:

You were at the desk?

BABBITT:

Yes, sir, I was facing the umbilical at the time.

PETRONE:

Were you sitting down?

BABBITT:

No, I was standing. I had started to turn toward the comm box to call the blockhouse either on normal comm line or page whichever was open. Out of the corner of my eye I believe I saw which was flame from under the boost protective cover in the area what could be the steam duct and continuing my turn. I never made it to the comm box because at that time more or less over my head I felt a pressure and heat and flame and I never made the call to the blockhouse. My next thoughts were to get out of there as quickly as I could. I proceeded out across the umbilical arm, the walkway there, to where I got to a telephone talker who was at the elevator of a crew standing by which would have been the normal emergency egress test and they had a man stationed there and told him to inform the blockhouse through his channels of what was taking place. I was preceded out the umbilical arm by three of my mechanics, Mr. Gleeves, Mr. Hawkins and Mr. Clements. From that time on it was - we were spent as quickly as we could, but with the amount of smoke, removing the hatches. I probably could answer questions better than I could speak freely on this. If there is anything specific.

THOMPSON:

Let me ask you one question about the full length of time involved between any untoward event and/or enveloping flames. How long a period of time do you think that full action?

BABBITT:

I can only guess, sir, there would be a matter of at the most maybe two to three seconds and the time it would take me to turn approximately 90 degrees to the comm box.

LONG:

Is this two to three seconds from when you heard Chaffee's voice until you personally felt

BABBITT:

Yes, sir.

THOMPSON:

That is, this means then that the first evidence you had there was anything untoward happening was that voice.

BABBITT:

Yes, sir.

YARDLEY:

And almost simultaneously you saw this flame coming --

BABBITT:

As I was turning I saw it from under the boost cover.

YARDLEY:

Two or three seconds after that you felt the big pressure?

BABBITT:

Yes, sir. In seeing the flame under the boost cover we, also, having been out there and been at the spacecraft many times when we do a normal cabin pressure check to where the relief valve goes on the cabin, we hear the, I believe I heard and at the same time saw the flame - the normal noise that we hear with this cabin relief valve going with the steam duct. The noise is sort of hard to describe but it is something that we hear all the time and know what is taking place at that time.

MATHEWS:

Were you turning --

BABBITT:

To my left.

MATHEWS: To your left - but you saw the flames under the boost protective cover and not coming out of the RCS doors?

BABBITT: Right, I would attribute this to be in the area of the steam door. It would be only speculation for me to say that maybe the command pilot had dumped the cabin or maybe the normal relief valve had dumped.

YARDLEY: You say you hear this relief valve all the time and are familiar with it.

BABBITT: When we are doing a cabin pressure check.

YARDLEY: In other words, it dumps normally at 5 psi differential.

BABBITT: Yes, sir, and its noise that most of us are familiar with having heard it a number of times, not only in the altitude chambers prior to the altitude runs there but also I heard it the same day.

FAGET: That was before you saw the fire or after?

BABBITT: It was before the main flame came. But we - I saw and I heard the venting sound and then as I say I continued my turn and a sheet of flame came towards me.

VOICE: Who did you instruct to go to the hatch opening?

BABBITT: My mechanical lead man, Mr. Gleeves, and as required he takes a crew with him. I understand it was Mr. Clements and Mr. Hawkins also.

THOMPSON: There is, I understand, an override on this relief, the pilot pressure relief that the pilot can use as an automatic relief of pressure, too.

BABBITT: Yes, sir.

VOICE: The pressure relief knot last night were not in the manual order.

YARDLEY: That would indicate that the pressure had built up in a very short time from 16 absolute to say 20?

VOICE: What is this steam tube?

BABBITT: There is a hole coming up it is a duct coming off the EC -- coming out the side of the spacecraft, and we have a, with a boost cover on, would have a tube inserted in there - to vent this downward.

THOMPSON: There's one impression we got out there, that the flame shot out way over the desk.

BABBITT: Yes, sir.

THOMPSON: With the paper -- did you see that flame. Was it a jet of flame or can you describe it in anyway?

BABBITT: All I saw was flame coming overhead as I was almost turned toward the communications box. My back was more or less, toward the command module. I was turned maybe of a possible 90 degree turn there, we'll say 75 degrees, all I saw flame come overhead and felt the heat and concussion of it.

THOMPSON: The papers on the desk, though, were charred.

BABBITT: Yes, sir.

THOMPSON: The distance is, what do you think, 10 to 12 feet?

BABBITT: I would say it must be 12 feet.

THOMPSON: On a horizontal, on a level with only desk height.

BABBITT: Yes, sir.

THOMPSON: Our question was, it was a rather narrow confined area that got the full extension of the that flame?

BABBITT: As I understand it, I have not been out to the pad since this has happened, as I understand it, but I believe myself and several people who were very near there, the desk, were very lucky to get away.

THOMPSON: They were rather close to the desk despite the fact that the desk itself, the papers on the desk were burned?

BABBITT: Yes, sir.

MATHEWS: I think you have to be careful to assume that was a jet because there are a number of evidences around that are more direct that indicated it was pieces of flaming material that fell in the area.

BABBITT: Might I answer that. My white coat that I had on and my shirt that I had on which were - well, the white coat looked like it had been hit with material or something like this to burn holes in it. My white shirt looks like it would be residue from, the shirt that I had on looks like it would be the residue from the white coat, from being burned as such.

YARDLEY: Like a cigarette ash burn hole?

BABBITT: Yes, sir.

FAGET: There were a number of these holes?

BABBITT: Yes, sir. They were mostly on my right shoulder which as I say, I would be turning to the left. May I illustrate?

VOICE: Why don't you make us a sketch?

BABBITT: I think I can do it assuming the spacecraft is in front of me here and my comm boxes are over here, I was turning, the comm boxes are a little low, so

I was turning down towards those and it was more my right shoulder that was hit with it.

THOMPSON: Where are the desks in relation to where you were standing?

BABBITT: It would have been behind me.

VOICE: Do you have a feeling that this area round you was pretty well filled with flames.

BABBITT: Yes, sir, very much so. I had the feeling that if I stayed low, I could get out all right and I had the feeling, too, that the only direction that I had open to go from there was toward the umbilical arm. It just looked to me, although I honestly can't answer whether I even looked at the other direction - it looked to me that was the only area open for me to go towards.

FAGET: You had on a head set and a hard hat?

BABBITT: I had on a head set and a white hat.

FAGET: And you say you felt pressure on your head?

BABBITT: Yes, sir. I felt a pressure - not as a blast or anything, but a positive pressure to where I was forced toward the comm boxes or towards away from the spacecraft.

VOICE: Did this over-pressure last very long?

BABBITT: No, sir, it did not.

(Background discussion)

VOICE: Was the kind of pressure you felt the kind you would feel if someone opened a furnace door? Was it that combination?

BABBITT: Yes sir, more that or the pressure of someone gently but suddenly pushing you. It wasn't a hard pressure or anything of that sort but just a positive pressure.

WHITE: Have you ever lit a gasoline or something in a bottle or bottom of a can and thrown a match in it? Was it that type?

BABBITT: Yes, it was. (Looking at drawing) This would be the umbilical arm. I was standing looking at the umbilical arm, the pad leaders desk being here. I would be facing in this direction when I heard the words, "Fire" and I turned in this direction toward -- which would be the communications boxes, and as I say, the boxes are a little low so I had to bend over slightly to get to them. The umbilical arm being here, I went out this direction to the arm and then out here.

MATHEWS: In other words, you went out past the place where the flame was coming out thru the boost protective cover.

BABBITT: I think - that would be where the white room would be attached. That would be approximately here. The length of the white room here. I would be in this area here. The steam duct. It is, as you face the hatch, it's to the left and below the hatch.

VOICE: Where is the cabin vent valve?

BABBITT: It is right here.

VOICE: Does it come out through the steam duct?

BABBITT: This is what we call the steam duct. It vents through this duct.

PETRONE: The boost protective cover limits might be interesting. Where were the limits of the boost protective cover?

BABBITT: The -- it would be in this general area. I can see it from where I am.

YARDLEY: You didn't see it coming out the side, over there? Right behind the desk?

BABBITT: No, sir, I did not. The limits of the boost cover is the sections that we had on, would be approximately here and say over here.

YARDLEY: But you saw it over on this side?

BABBITT: We saw it here, underneath here, which would be in the general area of the steam duct.

VOICE: Was this the initial thing that you saw?

BABBITT: This was the initial thing that we saw. I saw it as I was turning, which an over pressure would cause the thing to vent.

MATHEWS: When did you hear that? Can you give us any estimate of time between that period and when you first heard the fire signal?

BABBITT: I heard the fire signals, well, you mean as to clock time.

MATHEWS: No, the estimate of how many seconds.

YARDLEY:

BABBITT: In relation to hearing the fire signal. The time it would take me to say to a man standing in front of me, "Get them out" and turn, like that. Whatever length of time that is.

YARDLEY: Was that valve sound a single sound or.....

BABBITT: Sort of a whooshing sound.

MATHEWS: Did it signal more than once?

BABBITT: All I heard was once.

PETRONE:

Was there a definite click or just a whoosh?

BABBITT:

There is a definite whoosh and a cutoff, in normal conditions.

VOICE:

You used the phrase earlier when you were talking about this flame by the steam duct area. You used this phrase, "Seeing it out of the corner of your eye". Is there any doubt in your mind as to whether you saw a flame?

BABBITT:

No, sir, there is not. There is no real doubt in my mind that I saw it. It's an outstanding feature of things that we normally see in there. There is something that was unusual, but I was still making my turn towards the communications box.

FAGET:

When did you inhale the smoke to your knowledge?

BABBITT:

After we had proceeded out on the umbilical arm. The - I talked to the telephone talker, to the talker at the top of the elevator. Then I proceeded back in with the three mechanics who were with me to get to the hatch if possible. We were in there - time is - it's hard to say how much time there was. I would say not more than 30 seconds. In there long enough to know and be able to tell that we could feel the hatch. We could see it up very close but the smoke was so thick that we couldn't stay in there very long. We went out, grabbed the only CO₂ bottle on the umbilical arm on that level, went back in again, spent a little longer in there, we got the boost cover hatch off. The tools were in the white room. We had placed them there for the emergency egress test anyway. So we knew where those were. It was just a single multi-purpose tool. After taking that off, we left again. We made any number of trips in and out of there. I guess on possibly the third trip the smoke had cleared enough down on the deck below the umbilical arm to where I could see my head set and I stepped down and put it on and that's the first contact I had with the blockhouse, then. From that time on, we made a number of trips in and out. We did as we could as long as we could stay in there and then came out. We more or less went in as a group and came out as a group. As I was coming out I would report to the blockhouse, as best I could at the time. I know Mr. Page probably thought that there was something wrong that I kept yelling for people and equipment and things. At the time the smoke was so heavy that I couldn't see that there were people. My own spacecraft technicians, mechanics, NASA QC, NAA QC had gotten back into the level and were on the other side and were working on the fires in the area. We needed, at the time, we needed some sort of as I call it some sort of a battle lantern. These old Navy lanterns that you pick up. We couldn't see the hatches well enough to work very long. At one trip in we had to spend more than half of the time in there looking for the tool because as we came out we must have placed it in a little different position. As I was informed later on, it was about five minutes before we got the hatch off. I may very honestly have been possible 15 to 30 seconds late in reporting it to the blockhouse, because during that period of time we were trying to maneuver the inner hatch, to either take it out which has to be rotated to get it out or to get it down, to drop it down inside. We finally, I told them to drop it inside to place it in there as close as they could and then I reported it to the blockhouse that the hatches were off. Then I went back in and made my own observations on what I saw.

VOICE: Did you have to get special handling equipment to handle the inner hatch?

BABBITT: There are handles on the inner hatch which, fortunately, were hot, yes, but they could handled. The face of the hatch itself was extremely hot, but the handles were cool enough where we could handle it and could lower it or maneuver it.

VOICE: With your bare hands?

BABBITT: Yes, sir.

VOICE: What exactly was this fire indication at the steam vent? Was that the only part of the time you took off for the umbilical arm? Was that the only evidence of fire?

BABBITT: Prior to the main force, yes sir, that was the only impression that I had. As I say other than the call that I heard.

BAXTER: As to the - I'm interested in the sequence again. As to the time you heard the fire sounded by one of the individuals the time you saw the flame coming out of the vent the time you could tell it on the back of your neck. Could you give us this one time again?

BABBITT: Colonel, that's the thing I can't give you in time unless I timed it myself. Maybe one to two seconds. That's in the time it would take as I tried to illustrate to tell a man to get the crew out and start turning towards there. Seeing this but continuing to turn anyway one to two seconds, was all that I can say.

BAXTER: First time was the signal that you heard over the intercom?

BABBITT: Yes sir, the term fire, I couldn't tell you whether he said, in the Spacecraft, or in here or Command Module.

VOICE: Fire?

BABBITT: Right.

VOICE: Then the vent valve?

BABBITT: Then the vent valve.

VOICE: Then on the back of the neck?

BABBITT: Right, yes sir.

YARDLEY: Did you hear any other noise after the vent valve immediately preceeding this big rush of heat?

BABBITT: No sir, I don't remember hearing the pressure release, the main force. Maybe it was because I had my back to it. I didn't hear it.

LONG: Have you given all of this also on tape. has all this been recorded?

BABBITT: I have only spoken to my own management.

YARDLEY: Did you make a written statement?

BABBITT: Yes sir, I have.

LONG: The reason I'm interested is that the some of these sequences, events, that followed for plus 30 seconds would be interesting to look at but the problem is somewhat lengthy. Maybe it would be better if we have it in a statement. Is that available?

BABBITT: I have written a statement, yes sir. I may be able to amplify possible the first 30 seconds a little bit more if you wish me to in writing, but the first 30 seconds, it happened so fast, it's hard to explain it any better.

FAGET: I'd like to ask you some more questions. Now on the events when you first went into the white room.

BABBITT: After we had evacuated?

VOICE: The first time in and tell me when that was.

BABBITT: My very first time in the white room that day, was when.....

VOICE: No, no, after the fire.

BABBITT: O. K.

VOICE: How long after the fire when you first went in and I'd like to know about the condition about the smoke in the white room, what your impression where it was coming from and could you see in the window.

BABBITT: O. K. As we proceeded into - across the umbilical arm. there was billowing smoke coming out the level.

VOICE: Billowing smoke, what color?

BABBITT: It was a very dark gray. Seems to stick in my mind. It was a very heavy, thick smoke. As we proceeded in farther. knowing the umbilical arm as we spent quite a bit of time on it. the smoke was there we could see to a certain extent towards our feet and our hands. The hatch window -- I honestly don't remember looking at it.

VOICE: You didn't see any flames, is that it?

BABBITT: No sir, I don't believe I did, but I don't honestly remember looking in there.

VOICE: Can you recall seeing fire or lighting?

BABBITT: I did see fire in there. The fire that I saw primarily was from under-

neath, coming up under the hood of the white room outside the command module. We used the one fire extinguisher that we had to put out any small local fires in the white room of which they were only around the hood of the white room. Then as I say, the smoke was heavy and billowing enough to where we could only see in a small area we were trying to work in. We had to be pretty close to do that.

VOICE:

That first moment you did not locate the tool.

BABBITT:

Yes sir, we did locate the tool, because we had placed it in a specific spot. As I say, we had done preparations for the emergency egress teams that would have made a normal emergency egress test later on, so we knew where the tool was.

PETRONE:

I've got a question I may pose to the Board to ask you.

BABBITT:

Yes sir.

PETRONE:

The white room quite large is up high. This area over the hatch is up fairly high and the boost protective cover is about right to the right of the shelter there's a gap in there now which has been blown out a couple of inches between the boost protective cover and the heat shield. You were standing here as you looked. Just where did you see the flame? Did you see it in this area or did you see something come up over the top?

BABBITT:

Before all of this happened, the boost protective cover was laying not perfectly flat against the command module, but we will say within 1/4 to 3/8 of an inch from it. It was faired in as it would normally be. There was no large gap there. As I say I - it appeared to me to be more underneath the white room which is where the steam duct would be.

PETRONE:

The steam duct is on this corner.

BABBITT:

Yes, sir.

PETRONE:

And roughly how far from the aft heat shield?

BABBITT:

The steam duct itself is about, I'd say a foot above the aft heat shield.

PETRONE:

Fairly low, then isn't it?

BABBITT:

Right, but where I would see it would be below the aft heat shield because of the section of the boost protective cover that was on there. In fact we would see it to a certain extent almost down at the service module.

PETRONE:

Looking from here, your line of sight would take you to here.

BABBITT:

My line of sight being - my drawing isn't too well in scale. Standing here we can see this area underneath here, and it was underneath the hood of the white room.

PETRONE:

You looked then underneath the hood when you first saw flame and what direction was it going?

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PETRONE:

You looked then underneath the hood when you first saw flame and what direction was it going?

#14
J. C. MOONEY
PAA
JANUARY 27, 1967

At approximately 6:27 p.m., Eastern Standard Time, the Egress Team was preparing for the egress drill on Complex 34.

Upon receipt of the alarm via the radio from Pad Safety Office, Complex 34, I started to respond to the Complex in No. 250 vehicle. Before I reached the Dispensary, the Superintendent, Range Operations called on the radio and requested the Egress Team. I radioed the Station and requested all 3 units prepare to roll. I turned around and proceeded to the Station and parked No. 250 and entered No. 3 M113 which was ready to roll at that time. Time elapsed was about 2 minutes. We then proceeded to the Complex led by Egress member J. Blankenship in P-6 truck No. 16.

I called the S.R.O. on Fire Crash Net and advised him our 3 units were responding. Upon arrival at the south gate of the Complex, we again notified the S.R.O. of our location. We proceeded to the base of the umbilical tower and parked in our designated area. Egress members Blankenship, Crowl, and myself proceeded up the elevator to the 8th adjustable level. Upon arrival at the spacecraft, I met J. Blankenship coming back stating that we needed Scott Air Paks. They were ordered from below. I then met the Assistant Test Conductor from North American Aviation and asked him what condition existed. He stated the spacecraft was burning and he thought that we had 3 dead people in there. Upon approaching the spacecraft hatch we found it almost impossible to remain without breathing equipment, which had not arrived yet.

The hatches were removed and all 3 bodies could be observed through the hatch. They all appeared badly burned and no movement was visible. I then contacted the Test Conductor again and asked about the status of the spacecraft and the Launch Escape System. He informed me that they could not shut off spacecraft power since it was on internal power and that the Launch Escape System was armed. I instructed all my personnel to not to try to enter the spacecraft until our Pad Safety Officer and Spacecraft Test Conductor had assured us that all power was off and the Launch Escape System was disarmed.

We attempted to remove smoke and fumes from Environmental Chamber by disconnecting the A/C duct and using it to push the smoke out. Blankenship was notified to call Crash and have Chief Hipp notified.

We were told by Spacecraft Test Conductor and Astronaut Doctor to begin removal of astronauts. but found that power was still on and we moved back until Chief Hipp arrived. We then checked with Pad Safety Officer, Test Conductor, etc., and determined that we would wait until given permission to enter the spacecraft. It was given by the Doctor. Then Chief Hipp and we proceeded to remove Ed White from the spacecraft. He was wedged in under Gus Grissom and with his back to the east wall of the spacecraft lying on his left side. We removed White with a good deal of difficulty and took him to the ambulance waiting at the base of the base of the structure. We then went back to the spacecraft and removed Gus Grissom and placed him in an ambulance, returned to the spacecraft and removed Chaffee. Notified Pad Safety and Security that we had completed our assignment and were returning to Headquarters at 2:30 a.m., EST.

All persons involved performed their duties flawlessly and without any questions at any time. Many suggestions were made and tried; some with a great deal of success.

All members are to be congratulated for their tireless efforts. We were only deeply sorry that we could not do more for all involved.

BABBITT: It was more or less down, more or less down under the heat shield - boost protective cover.

PETRONE: And what color was it?

BABBITT: Oh, I would say a bright orange - it wasn't a yellow flame. It was more like a bright orange.

FAGET: This was after you felt the heat.

BABBITT: No, this was before.

FAGET: Before you felt the heat.

BABBITT: Yes, sir.

MATHEWS: You never saw the thing coming out other than ---

BABBITT: As I say, I did not see the main flame.

BORMAN: Prior to all this, you saw no smoke or smelled no odors whatsoever.

BABBITT: No sir, I might point out as I believe has been pointed out before. I came in my normal shift around 3:30. Mr. Cortolla the first shift pad leader remained on since he had started the -- he had put the crew in and had started the closeout. We normally do this rather than relieve and make a break in the middle of an operation like that. I was present when there was an odor detected coming out. We had a sensing port which we use to check the oxygen level in the spacecraft as a part of the cabin pressurization and this sensing port is right, very near the white room door and I ah - the other people working in there smelled this odor. This is the only unusual item that we ran into.

MATHEWS: That was the odor that Grissom alluded to.

BABBITT: I believe it is, yes, it was that - the odor that he mentioned was before I had come in to work, before I had come up to the white room, to that area.

VOICE: You smelled this how long before the fire broke out?

BABBITT: Oh, it was a good 2 1/2 hours. The inner hatch was closed.

MATHEWS: What was the odor like?

BABBITT: It was sort of a pungent odor, an odor like, oh, not carbon tet or anything like that, a mixture of maybe ammonia and oh, just a - the way I can describe it is a strong potting compound odor, some of the commercial potting compounds.

MATHEWS: It was an oily odor, was it?

BABBITT: No sir, it wasn't.

MATHEWS: Was it a volatile material odor?

BABBITT: It didn't appear to be, no. It reminded me of a potting compound that we had been using earlier that we were all familiar with.

THOMPSON: Did it smell more like an overheated potting material?

BABBITT: No sir, this smelled like removing the cap from this potting compound in preparation to use it.

VOICE: How widespread was that odor?

BABBITT: As I say, we were right near the sensing port where we attach the Beckman analyzer and there was just a venting out there. That is right beside the hatch going into the white room. -- The wall on the right as you go in the door.

MATHEWS: Could you think a little bit more on what that odor would be like and give someone a note on what that odor was like?

BABBITT: Yes sir.

WHITE: That sensing port going into the suit loop or into the cabin?

BABBITT: It goes into the cabin. It comes out the same point of the hatch that we pressurize the cabin with.

YARDLEY: You were smelling what coming out of the Beckman?

BABBITT: Right.

YARDLEY: In other words, this was a sample of what was going through the Beckman into the exhaust, to the white room?

BABBITT: Right.

VOICE: And was this just a temporary whiff or did it persist for a long time?

BABBITT: No, with the Beckman analyzer, you repeatedly squeeze the bulb to get air samples, and we were getting it continuously while we were taking our samples.

YARDLEY: So when you sampled, you got it?

BABBITT: Right.

VOICE: Then it went away after a while.

BABBITT: It appeared to. After we had purged once more, it appeared to lessen.

VOICE: You repurged the cabin to get rid of it?

BABBITT: As I understand it, as I say, I was only observing it at the time because the other pad leader still had the control of things.

DONNELLY: It took them a long time to purge? Correct? You know nominal is 20 minutes and you were in there for at least an hour purging. Is that right, George, about an hour?

PAGE: Yes -- something to the effect of recalling - I think the numbers were that for the first 20 minutes they got 50%, then they purged again for 15 minutes. About 75% at that time they suspected the Beckman analyzer. They got another Beckman analyzer and did another purge -- (interrupted) (goes right into the continued typed sheet) -- and got 92%

PETRONE: I'd record that for the record that statement by George Page who is Test Supervisor.

LONG: Is that sequence of purging in itself unusual?

PETRONE: No, its been encountered before, it's longer than the nominal time.

DONNELLY: No, it's longer than what you set your sight for, but it has been encountered prior in an altitude chamber run. You can't say that it's something new.

VOICE: I think the real details on that could be better defined -- by others.

THOMPSON: Are there any other questions that you want to ask while he's here?

LONG: One thing I gather is that none of you was equipped with any kind of mask. That is not the procedure for this.

BABBITT: We had gas masks up there, yes sir, they were the standard, oh, I believe mining gas masks. I myself tried twice to use them, I had - because well, the first time, I pulled the tape off the bottom of one of them and tried it and it just sucked up tight at my face like I wasn't getting any air through it, so I tried another one and they had the telephone talker because I couldn't see too well, because the amount of smoke that I had been in -- had him pull the tape off it -- he hadn't been exposed to any smoke. I tried it and it didn't work either. I have heard the same comment from a couple of my mechanics also. We did have masks at work, yes, but the masks didn't work long enough for anyone to spend a long period of time in there. They, the men, said they'd get in there maybe spend possibly a minute or a minute and a half and they would start choking up, too.

MATHEWS: One thing I would have done, you may have stated, I think you did say you initially went into the white room and approached the hatch and thought there were flames in that area.

BABBITT: There, we saw, flames around the hood area of the white room.

MATHEWS: And how long a time was that between the first time, between the fire signal and that sighting.

BABBITT: Possibly 30 seconds. 30 - 45 seconds. As long as it would take me to go out of the to the umbilical arm and turn around and come back into the white room.

FAGET: How long once more, how long was it from the time you heard the relief valve and you felt to your right side was pressure.

BABBITT: Nearly simultaneously? or were

VOICE: No, they were not simultaneous. There was a delay between them, yes. I could speak in terms of two and three tenths of a second but the time isn't, I couldn't answer you really how long it was.

VOICE: What happened before that it was less than

VOICE: Yes sir, it was such a quick period of time that I couldn't tell you how long it was.

VOICE: Dr. Debus asked a question, would you like to answer?

VOICE: Yes sir.

DEBUS: This arrow indicates that you went this way....

VOICE: Yes sir.

DEBUS: and you gave the others order to tell the blockhouse....

VOICE: I gave, I went out the the talker at the umbilical tower elevator.

DEBUS: It is all the way....

VOICE: It is all the way out to the end.

DEBUS: Did you observe at that time anything back towards the white room.

BABBITT: Smoke and flames, that's all I could see.

DEBUS: You saw flames in the white room.

BABBITT: In the whole area there was random fires.

DEBUS: Including the platform enclosure?

VOICE: Inside, yes sir.

VOICE: Yes. Can you estimate how long it took for your departure to go back to the white room. There is a door I believe.

VOICE: Yes sir, there is. That door by the way was opened by the three mechanics who went out ahead of me.

VOICE: They went out here, opened the door and then went in?

VOICE: Yes sir.

DEBUS: Was there anybody in the white room at the time?

PETRONE: Which door, there are two doors there.

BABBITT: OK, there is a door this thing right here on the white room. There is also a door.....

DEBUS: Does that have an automatic closer?

VOICE: That door we have locked open as part of the procedure for the emergency egress which would have normally taken place.

VOICE: This door here opens inward?

VOICE: Yes.

VOICE: I came across up the three small steps and out this way through this door. This door was already open. As I understand it from my two mechanics, my three mechanics, they were approximately somewhere in this area when the main force went -- they went out this way. The door was already open when I went through it.

DEBUS: What do you describe as the main force?

BABBITT: The flame and heat that hit me at the largest part of it.

DEBUS: While you were still there?

BABBITT: Yes sir, while I was still up there.

VOICE: Where's the other door to the part of the white room that opens into the hatch? Is there one on the other side?

VOICE: There isn't a door as such, there's a large area.

PETRONE: There's another door....

VOICE: There's another door on this end....

DEBUS: that's always opened close it....

VOICE: No it is not, no.

PETRONE: For the test....

VOICE: For our normal operation we kept this door closed, then we could control the access to the white room and try and maintain white room conditions.

DEBUS: How was this door during the event?

VOICE: This door? Was closed.

VOICE: Was it locked?

VOICE: I believe it was, yes.

DEBUS: There was nobody else inside the enclosure?

VOICE: To my knowledge, no, Dr. When it happened, my only thoughts were to get out. The only way I could see out was across the umbilical.

VOICE: Where were your three mechanics that preceded you?

VOICE: They were, as I say, I had given the order to get them out.

VOICE: Yeah, but I mean where were they before this ever happened?

VOICE: Before this ever happened they were right near me because they were the same gentlemen who would be working on the umbilical pull at T minus zero.

VOICE: Was there anybody up there near the hatch?

VOICE: No sir, there was not.

DEBUS: So you felt that you could not get the astronauts out that flame sheet and therefore you went there. Then when did you decide you could try by now? Had it subsided?

VOICE: After it had subsided my thoughts are sort of confused to be honest with you as to which I really thought of first and get back in or to let the blockhouse know what was going on. After I told the telephone talker up here to notify the blockhouse, then the four of us proceeded back in here.

DEBUS: So by that time something had subsided

BABBITT: Yes sir, I would say this was possibly 30 to 45 seconds.

DEBUS: I see. So was there still flames visible in a flow out sheet? Or was there more localized?

BABBITT: No sir, more random fires, small fires. To be honest with you, we couldn't even see the smoke was thick enough where we couldn't initially see the fire in this area. I saw....

DEBUS: That area would be closed by the enclosure, this is outside the enclosure.

VOICE: This would be the main....

VOICE: Is that inside the enclosure?

VOICE: Yes sir, there is a large portion inside.

VOICES: Jumbled questions. Inside what enclosure?

VOICE: This would be the level 8 structure here and this portion is inside that structure.

DEBUS: When you went in and out you went out here to get some breath of fresh air.

VOICE: Yes sir.

VOICE: And back in through here.

VOICE: Yes sir. The period of time I was talking to Mr. Page, the test supervisor, I was approximately here. I found my headset was approximately here.

VOICE: Now on the headset, is your assumption you started out with the headset but dropped it on the way out?

VOICE: I have a feeling that I ran out from under my headset. I don't think I took it off first.

YARDLEY: Were you plugged in at the time?

VOICE: Yes sir.

VOICE: Where were your gas masks?

VOICE: The gas masks would have been in a box right here.

VOICE: You had to go back over and get them out.

VOICE: Yes, the.....

YARDLEY: How did you get around to there?

VOICE: Well, there was some down on the umbilical tower, there were some on the next level below and one of the men got some up to us.

VOICE: You didn't actually go down and.....

VOICE: We had about five of them, five or six.

VOICE: These were used yes by the crew other people who came back in. There was a problem with that, also, which I should point out in that when you went out the doors on these levels, on levels, six, seven and eight, they were the crash bar type doors. When you went out, you were locked out. One of my mechanics, Mr. Metcalf, went down as I understand it about four levels on the gantry, came across on the first level he could, and came back up the one side only where there is a door that is always unlocked from the outside, which would be our normal access, this is done for cleanliness, and security reasons. So, most of the crew until someone opened the doors was locked outside of the level 8.

VOICE: How many men were in the enclosure at the time started this and at various intervals.

VOICE: Up on this level I would have to estimate about 18 to 20 at the time. We have a normal spacecraft crew up here and QC plus we had GSE people also who were supporting us for the umbilical pull, down on level A7 but up on structures so they could support the umbilical from below to prevent damage was more GSE, mechanics and technicians.

VOICE: Do you know when the east door, Colonel Baxter, of the white room is open?

VOICE: No sir, I don't, it was much after I left.

VOICE: Which door is that, the one right there by....

VOICE: Within your crew, sir, is there any summary responsibility about the question of getting crew out in emergency removal crew, you speak of these 18 people, was this particular responsibility specifically yours or the three mechanics you had with you? Others that were presumed had orders to be involved at this time.....

VOICE: It was the responsibility of the mechanical lead man to take his direction from me and he had delegated, designated certain mechanics to be with him unless properly relieved in case we had some condition where we had to take the hatch off. We thought more in terms of test scrub or something like this. Most of our mechanics are experienced in handling the hatches anyway. But he picked two of his best men to work with this and they were staying right with it.

THOMPSON: I think I understand that the situation relative to what you, the first things you saw. The first thing in sequence, first was audible indication of trouble, the voice.

VOICE: Yes sir.

THOMPSON: Second, and with a very short period of time, maybe two seconds later, you saw flames on the far side.

VOICE: Yes sir.

THOMPSON: And from there on there were many, there was flame and smoke and all this other action and I don't believe that you said you ever got to see flame inside the, this capsule.

VOICE: Not to my knowledge. We, in the time that we spent in there I have to be very honest with you I don't think we specifically tried to look in there.

THOMPSON: I understood you. This does not mean there wasn't flame, it means as far as you're concerned your observation was flames is all identified with external sources.

VOICE: Yes sir. At the time I will say this, at the time that we did get the inner hatch open, we saw no flame then.

VOICE: Great deal of smoke inside.

VOICE: Yes sir, there was.

PETRONE: In fact, what was your, who reported this. Who was there when the hatch opened?

VOICE: I was.

PETRONE: What did you report, sir?

VOICE: Yes sir, I reported to the test supervisor the hatches were off.

PETRONE: Do you remember your words, can you describe for us what you saw and reported? In terms of smoke and visibility.

VOICE: I have to be honest with you gentlemen, when the hatch came off and I looked in, I believe Mr. Page will I may have been evasive on it, I tried to give the impression of what I saw, and there was a catastrophe, but knowing that the communications circuits are rather open, I tried not to compromise things, too. I think I got this impression across, but.....

PETRONE: I was wondering, the question of smoke billowing out, did more smoke come, was there still a pressure?

VOICE: No, there was no pressure. There was smoke in there, yes sir.

PETRONE: Did it billow out?

VOICE: Not necessarily.....BILLOW.....It was more a layer, laying in there. Which, as we got the hatch off,

VOICE: Did you have a good deal of light when you looked at that point?

VOICE: No sir, it is not, even under normal conditions, unless we have lights inside the spacecraft. You can't see that well....in there. I wish Mr. Petrone, I could answer you really on what I did say because I don't remember.

PETRONE: I did hear you, I wanted the board to hear what you said.

VOICE: I said I tried to keep from compromising the situation but get my impression across.

VOICE: Some of the words you said were "I can't see much but I can feel...."

PETRONE: I recall that. Since it's not possible to describe what it looked like.

VOICE: -----

VOICE: Gentlemen, I appreciate the opportunity to speak to you. May I say one thing? I can't commend my crew - by my crew I speak of not only my mechanics and technicians but my QC people and NASA QC people enough for what they did. The effort they made towards the whole thing. That's really the only thing I wanted to say about it, the effort was - it was fantastic - they're highly trained and they showed it.

DONALD O. BABBITT

NAA

FEBRUARY 3, 1967

QUESTION:

Would you identify yourself by name and organization?

ANSWER:

My name is Donald Babbitt and I work for North American Aviation.

QUESTION:

Mr. Babbitt, you are probably aware of the critical nature of the information which you have previously furnished and will furnish to this panel, and we ask that you do not discuss your observations or viewpoints with anyone other than Apollo Review Board members or members of panels or other designated personnel. Mr. Babbitt, we have your written statement and we would like to ask that you supplement this with whatever comments you would like to make to expand as you feel appropriate, from the time that you first were aware of the situation and till you were in the White Room and were able to get to the hatch or approximately that period of time.

ANSWER:

As the North American Pad Leader, I was located at the Pad Leader's desk which is approximately 90 degrees to the right of the command module hatch on the south side of the gantry level 8. The first word that I received of any problem started the incident, was over the headset on Channel Black 3, I heard the words, "Fire in - it was either in the command module or in here -" The term "fire" stuck out more than anything else. I, in turn, gave word to my mechanical lead man, Mr. Gleaves, to get the crew out, and had started a turn to the left to change my Operations Intercommunications Systems (OIS) box, or to get on the Public Address (PA) system to notify the blockhouse. At that time I never completed my turn because I was hit with a force of flame or pressure, both flame and pressure, that forced me toward the comm. box and down slightly.... I was hit by the force of pressure and heat. My immediate reaction was to get out of there, to evacuate the area, which I did do, I never completed my move to the comm. box. My moves were toward the umbilical arm and out of the umbilical arm, out to the umbilical tower itself, and upon reaching clear air outside, I came upon a telephone talker who was at the umbilical tower elevator standing by for the - which would have been the normal emergency egress test, and told him to notify the blockhouse that we had a bad fire on the level near the command module, and then as I also came onto the umbilical arm, I met three of my mechanics, Mr. Gleaves, Mr. Clemmons, and Mr. Hawkins. After notifying the telephone talker at the elevator on the umbilical tower, the three of us with a CO₂ bottle, proceeded back into the White Room to attempt what we could in removing the hatches. The time period as I believe it from the time that I heard the words "Fire" from the audio OIS system till we went back into the white room. I can only estimate to be between ten and twenty seconds. I have no way of knowing exactly how long this time would be. As we proceeded into the White Room, the smoke was extremely heavy. It appeared to me to be a heavy thick grey smoke, very billowing but very thick, we couldn't, as we went in the first time, see the hatches well to work, we worked as we could by feel on the boost cover hatch, we had to come out in approximately, I would say twice, to even finish the boost cover hatch and go back in after removing the boost cover hatch. The smoke started clearing some, but we - there was still a problem with staying in there. We made several trips in and out. We could see as we worked on the outer ablater hatch a little bit better. We could see where we were working, but

could not see the whole hatch itself, and knew the general area of the place for placing the tool for unlatching the hatch, and as we removed it, we got it outside the White Room and also, about that time, I had to change crews in working there, because Mr. Gleaves had come very close to passing out from smoke. I had to order him out. Mr. Hawkins was in not too good a shape and Mr. Clemmons was also the same way. As we came out with the outer ablative hatch I observed more people in the level A-8, the gantry level A-8, and I motioned for two more of them to come in and assist us in removing the hatch. When we went in for the inner hatch, we could see the hatch fairly well. We could see the whole hatch well enough to work on it, the handles on the hatch, on the outer side of it, were cool enough to hold on to but the face of the hatch itself was extremely hot. As we unlatched the inner hatch and we attempted to rotate it (you have to go down slightly and inward and rotate the hatch to take it all the way out) we were unable to do this, either due to the speed or confusion or obstructions, so I told them to drop the hatch straight down, meaning to put it down on the floor inside the command module near the wall so that we could clear it.

This terminates the statement of Mr. Babbitt.

DONALD O. BABBITT

NAA

FEBRUARY 8, 1967

QUESTION:

This Statement consists of an additional statement furnished by Mr. Donald Babbitt who was Pad Leader on 34 during the incident. Mr. Babbitt, we've asked you to come in today to go into some detail with us on your observations when the inner hatch was finally removed. And, we are particularly concerned with the configuration of the flight crew members as well as you can recall.

ANSWER:

When the inner hatch was first lowered, the only thing that I could observe was smoke inside. We could only feel the flight crew. We could not see them very well as I could tell. As the men working with me went out because they'd been in the smoke quite a while, I went back in, oh, approximately one minute or a minute and a half later, and all that I could observe was what appeared to be Mr. White laying on his back with his arms over his head, appeared to be reaching for the hatch or in something in that vicinity. I also observed what appeared to be Mr. Grissom laying with one of his arms through and appeared to be reaching in the direction of the hatch also. I went out again for a short bit and came back in maybe thirty seconds after that. I could see a little bit more. The smoke had cleared some more. All that I could really see was, oh maybe, to the waist of Mr. White. It appeared to me that they; I at first got the impression that they were off the seats; and then I got the impression that no they were on the seats. It appeared that their suits were shredded. I could see bare skin. No one, at any time while I was in the White Room or up on Level A-8, touched the crew other than as I say when we first lowered the hatch and could feel in there to see what was near the hatch, if we could feel the crew at all. One of the firemen stepped in for just a very short period of time. I directed him not to bring any fire apparatus into the White Room and he stepped back out again. As I say, no one else from the time that I was up there, went in the White Room but myself. The crew appeared to me to be in their normal, in-flight position. I could only see what

appeared to be Mr. Grissom's left arm reaching through Mr. White's arm. I could not see his body that well, but it had the appearance of being in its satisfactory or its normal position. I did not observe Mr. Chaffee because I was a little bit too far to the right of the hatch and could not see him. Mr. White appeared to me to be as I say, laying in his normal boost position. I could not tell whether his head rest was up or down. In fact, I couldn't even see his features because of the, what appeared the smoke or soot blackened face plate on his helmet. My observations are based on the looking from the inside of the White Room as close as I could to the hood without stepping on the hood of the White Room. The hatch was lowered as far inside as we could lower it, and it was still sticking above the lower edge of the hatch frame about three to four inches.

This concludes the statement given by Mr. Babbitt.

JAMES D. GLEAVES

NAA

JANUARY 29, 1967

PETRONE: Are you ready for Mr. Gleaves?

THOMPSON: Who is the next?

PETRONE: Mr. Gleaves, mechanical lead technician.

THOMPSON: Where was he?

PETRONE: He was on the platform. Mr. Babbitt reported he would be the man in charge of the technicians.

THOMPSON: Mr. Gleaves, we are asking you to appear before us and give us your account what transcribed and with the understanding, however, that the same restrictions continue regarding holding all this information under restraints. So with that I think perhaps you could just go ahead and tell us about where you were and what you saw and then there will be a lot of questions probably.

GLEAVES: The last I remember we were waiting at ten minutes and we were holding for this communication problem and there were about four of us in the vicinity of the umbilical waiting to jettison the umbilical when it came time for us to do so. And Don Babbitt, the pad leader, turned up the monitor a little louder and during this communication problem we sent most of our guys down for coffee break and on this communication deal if I remember correctly they went from black 3 to black 2 or from black 4 to black 3 and the instant Mr. Babbitt flipped a switch as far as I can tell I believe it was Mr. Chaffee that hollered that we have a fire in the spacecraft. And immediately we ran to the white room. And as we started up the swing arm there was a loud shoooooooo. Like maybe Grissom or one of them had dumped the cabin pressure. And as we entered the white room there was a big flash and we knew something was fixing to happen and we started back out. As we did so, the spacecraft exploded and fire and debris covered the whole right side. It appeared that the flames and all the debris came out the right side of the spacecraft. In the area of the rendezvous windows in this area. And it knocked us up against the orange door, which I might say opens the wrong direction. We had trouble getting out due to the smoke and fire in this area. But once we were out in the swing arm everything settled down in just a few seconds. I returned to the white room and the smoke, heat and flames were so bad at the hatch area that we just couldn't stay near the hatch. So we wouldn't...

VOICE:

The three of you?

GLEAVES:

No sir, I returned. Right. Then in the meantime a gentleman named L. D. Reece found the oxygen masks and was handing out the oxygen masks we had trouble locating the strip of tape on the bottom because they were painted the same color as the connector. And several times, one, two, three or four of us returned without masks and stayed as long as we could, then finally Babbitt and myself entered the white room after the fire had been extinguished by Jerry Hawkins and on all fours I crawled. I found the tool to remove the ablative hatch. I removed the ablative hatch and I didn't have a mask on at this time.

and I just couldn't take it no longer so I returned out and gave the tool to Jerry Hawkins, Steve Clements and L. D. Reece. And they removed the ablative hatch and L. D. Reece threw it out on level A8 and then these guys, also they had masks on, they removed the inter hatch and it was so hot they just let it drop down under the couch. So they come back out and I in return went in and kicked the inner hatch and it sort of fell down under the couch. I pushed but it was still hot and inside the spacecraft was black and filled full of smoke. You couldn't see anything at all. So I returned to A8 and out of the white room and got a flashlight and went back in and tried to see inside the spacecraft but the heat was too great and the smoke was too bad so we returned out on A8 and we continued to go back in. And as far as I can remember it took maybe 10 or 15 minutes for any fireman or any help to get to us up on the swing arm.

THOMPSON: Is there any point here? Could you draw a sketch indicating the sequences?

BAXTER: Before you draw it, do you remember who the first assistance was other than you three mechanics?

GLEAVES: Do you mean from below?

BAXTER: Right.

GLEAVES: We had two of our guys I don't remember their names. Willie Medcalf and some other guy came up to help us on the swing arm. From below on A8 there was a NASA QC and a couple of North American QC with fire extinguishers fighting the fire in and around the hatches as they were coming out. This being the command module in the white room here the pad leaders desk was here we had an electrician sitting here talking to an engineer and if I remember right we had an electrician sitting here at the lead man's desk, the umbilical being here I was standing in this area. We had a man here sitting in a chair monitoring the 401 unit which was supplying GO₂ to the OP-1 on sector 1 and another one of the mechanics was standing here. And when Babbitt turned up, Babbitt was sitting in this area when he turned up the monitor, and they hollered there is a fire in the spacecraft, I immediately run and went in the white room with Mr. Hawkins and a QC in the same vicinity as we went up these two stairs we heard a loud shooooo like maybe they had dumped cabin pressure. And once we entered the white room there was a tremendous flash and maybe the reflection come out of the hatch, I don't know. But there was a tremendous flash and then smoke and we started running in this direction and as we did from what I could tell the fire and debris just covered this whole area, just one big boom, one big blast.

VOICE: Which door did you get caught in?

GLEAVES: This is the orange door that the astronauts enter from the swing arm. This door opens in this direction, it knocked us against this door and we had to unpile to get out. In fact, the smoke and all was real bad at this time.

VOICE: Was there any noise associated with the flash?

GLEAVES: Yes sir, it exploded just like a big bang.

VOICE: Did you see anything of the hatch regard to the hatch or to the hatch window?

GLEAVES: Well, as I entered the hatch, I mean as I entered the white room we saw this flash smoke and we thought it was going to blow or something bad was going to happen so we came out of the white room. And the instant we came into this area which is about three feet maybe from this door it exploded.

PETRONE: You were outside the white room?

GLEAVES: That is right. With the flash and a lot of smoke and then we run.

PETRONE: Was this direction of this explosion in the white room?

GLEAVES: No sir, it was from this direction. The white room fits up in this area and this is all open to the umbilical.

PETRONE: You identify this as coming from the direction other than the white room?

GLEAVES: Yes sir, it come out between the white room and the umbilical I would say in the neighborhood where the windows are that is where it seemed to be. In that area.

THOMPSON: Can you indicate how far around that exterior shield goes, the outside shield, the boost protective cover, how far around that that comes relative to your picture?

GLEAVES: Well, the night before we had installed the boost protective cover for this run on our shift. And the boost protective cover when maybe a foot on the other side of flyaway umbilical. It went from there around to the same location on the other side, which if I am not mistaken is CM8 the opening here and maybe 13 here was still open but it covered this area.

VOICE: Show me where the door is into the white room.

VOICE: Well, the door into the white room is a sliding door right here in two pieces.

VOICE: That is the one if you had continued to go into the hatch you would have gone?

VOICE: No sir, we were into the white room.

PETRONE: What was the position of the door?

VOICE: The door was in this position right here.

PETRONE: Open or closed?

VOICE: Well, half of it was open. These sliding doors We kicked it open. Yes sir.

PETRONE: How many people got into the white room?

GLEAVES: Myself and one guy behind us.

PETRONE: You were fully in?

GLEAVES: Yes sir.

FAGET: Did you have a chance to look into the hatch? You were looking in what direction? At the time you felt this explosion.

WITNESS: When we saw the explosion, we were on our way back out because we had seen the flash, the smoke, and we knew something was fixing to happen and we left.

FAGET: You saw the flash, it came from around the seal, in the white room?

WITNESS: The reflection appeared to come out... the hatch. There is a glass in the hatch, yes, sir.

THOMPSON: As I understand it, the point you're making is that you did not see flame directly, but you saw the whole area light up, reflecting a flash, is that right?

WITNESS: Yes, sir.

MATHEWS: Where were you, where did you say you thought that....? You say you thought the flash came from the window?

WITNESS: On all three hatches. There's a little window on the boost protective cover on the inner hatch. On the outer hatch it gets a little larger, and the one inside is a little larger than it is. But there is a direct view from there into the SC.

FAGET: But you didn't get a chance to look in it?

WITNESS: No, sir.

FAGET: Is that where the light looked like where it came from in there, or from around the hatch?

WITNESS: It just appeared that there was a big flash, and I couldn't tell whether it came out through the window or whether it was coming from elsewhere. But there was the whole area lit up.

FAGET: The whole area?

WITNESS: Yes, sir.

FAGET: Inside the white room?

WITNESS: Yes, sir.

YARDLEY: That wasn't the violent...as several seconds later when you got out of...

WITNESS: No, sir, that's right. The big flash, as we went up the steps, like I say, we heard this whistle like maybe the 10 disrupted cabin pressure and a chance, maybe to try to get out. And, as we entered the white room, there was a big flash, and then we turned and started to run, and as we did, it blew, and there was an explosion and a tremendous amount of flame and smoke.

BORMAN: Then now did you to that door that was closed?

WITNESS: Yes, sir.

BORMAN: Then you ran out?

WITNESS: Yes, sir.

VOICE: Which door did you run out?

WITNESS: We ran out this door here, we....

VOICE: Then out it again, anyway though you regrouped and....

WITNESS: Yes, sir. That's the only door we could get out.

VOICE: If you went out the other door, you couldn't get out that way because that was really burning? Out there?

WITNESS: In this area? Oh yes, the Pad Leader's desk was on fire, and there was debris and all, laying here on fire.

VOICE: Tell us about this explosion. Try to think of some analogies to describe what is sounded like, now that you think about it, was it a crack, was it a whoom as if you threw a match into a barrel of gasoline, what was the character of the noise?

WITNESS: I would say it was like maybe when you were a kid and you put a fire-cracker in a tin can and it exploded and you had the lid on it tied down and it blew the whole side out of the tin can with the flames shooting out.

BORMAN: The noise was like that firecracker?

WITNESS: Yes, sir.

BORMAN: It was a loud bang, a loud explosion? Pardon?

WITNESS: Bang? Yes, sir.

BORMAN: Would you review for us again what you were saying about the men up near those oxygen bottles, what they were doing up there?

WITNESS: In this area?

VOICE: Yes.

WITNESS: We had two GOG bottles sitting here on a bluge which is a ZOO 025-401 unit which we were feeding in oxygen to sector I, to OP I that fed the fuel cells. We had a man....

BORMAN: This was being fed at the time of the fire?

WITNESS: Yes, sir. We had a man here whose prime job was to monitor that to make sure there was 750 psi remaining on this gauge at all times. Anytime it got low, this man changed the bottle. Then we had another man standing here with myself at the umbilical....I believe he was in this area, he was actually closer to the S/C than myself, but he was between me and the white room, and we were standing there waiting to pull the lanyards to jettison the flyway umbilical when

our time came up which was T-10 and holding.

BARTON: This GO₂ was being fed where now? Does that go into the umbilical into the service module?

WITNESS: This GO₂? No sir, it goes into sector 1 down on the service module.

VOICE: Is this what they call the pad pressure on the tank?

PETRONE: No, _____

WITNESS: Yes sir, it's in a test port no, it's ah, in a servicing port, fill port, right.... into....

VOICE: Into the cryo oxygen....that's right.

PETRONE: This isn't a typical engineering way to describe it. Your two bottles - you draw your oxygen for this test, directly from a bottle, fed into the system rather than the cryogenic system you normally draw your oxygen from the cryogenic tank, liquid oxygen, in the service module, as it boils off you feed it into the command module, into the surge tank which has been described to you a few times, in earlier discussions, into the surge tank into a set of regulators as you go into the environmental control system, cabin, of the suit loop. So this, for this test, we had no cryogenics aboard. It gives you the oxygen pressure you need to feed the O₂ into the cabin.

VOICE: And at the same time is one feeding oxygen to the fuel cells?

PETRONE: Fuel cells were not active. They were bypassed - they were on - you will find that the power system was not running. We had other things. The fuel cells were not active.

THOMPSON: Well, I think it will be very important, in that, to know where they were bypassed because there are a number of parts of the system brought in even though the oxygen is being fed in from....

PETRONE: I am not sure that Mr. Cleaves is the man to give you the details on the configuration, but we on the panel, Mr. Williams, is on....the final configuration of the bottles, the loops and where they're tied in.

WILLIAMS: This shows the 6th deck. The platform and the steps.

BAXTER: That's a point I made earlier, I wanted to be sure.

VOICE: Well, let me come back to when you ran out the door, you moved when Abbott came out the door or did you not wait for them? You went back by yourself?

WITNESS: Well, when Babbitt came out, he was screaming for someone to please get them out of there. And, we returned, not only myself, I returned first, but I came back out and at that time I was given a fire extinguisher, and I passed it to Jerry Hawkins, and he, in turn, went in and emptied it to extinguish the fire around the hatch. But, there was five of us out here, and we each took turns going in and out trying to do something.

VOICE: Did you have a gas mask?

WITNESS: At some times I had a gas mask, yes. Other times, no.

FAGET: At any time that you went in there, did you notice flames inside....

WITNESS: Inside the bird?

FAGET: Through the window, yes.

WITNESS: No sir, the smoke was so great that you just couldn't see anything. But there was definitely flames coming up outside like it was coming up from the next level around the hatch.

THOMPSON: I think you've answered this question, but I want to be sure I understand it. The point where you were just prior to your receiving a first indication that there was anything unusual about the whole thing, what was the first indication that you had that there was anything wrong? Where were you?

WITNESS: I was standing in the area of the umbilical.

THOMPSON: And what way were you looking at that time? Do you know which way you were facing?

WITNESS: Yes, I was talking to the pad leader, or I had been talking to the pad leader.

THOMPSON: And what was the first event that gave you an indication that there was something wrong?

WITNESS: When Mr. Babbitt switched on the communication. Like I say, it was either from Black 3 to Black 2 or from Black 4 to Black 3, I don't really remember which it was, but the minute he switched, it sounded as if it was Mr. Chaffee hollered, "We have a fire in the SC." And at that time, we all run in this direction toward the white room.

VOICE: Why did they switch it?

VOICE: They were having a communication problem.

VOICE: Well, why did they switch it at that particular time?

VOICE: Because as he monitors the different channels on his head set, when he follows the test, and when the blockhouse who it is says go from Black 3 to Black 2, he immediately switches.

VOICE: We assume that he switched over to this because the blockhouse had instructed him to.

VOICE: Well, because everyone on this channel was switching.

VOICE: Right, before they switched, they were talking to Mr. Grissom, and Mr. Grissom they told him he was very garbled; they were talking to Mr. White and he said he was a little better than Gus, but he was still garbled, and Mr. Chaffee, they told him that he was the best of all. That they could understand him more

plainly than any of the others. And when they asked them all to switch and that's when they started flipping channels, and that's when I'd say it was Mr. Chaffee hollered that we have a fire in the SC.

VOICE: How much switching action was both in the capsule and on the loop?

VOICE: Everyone on the loop everywhere was changing switches.

PETRONE: Do you know what the time was, of the switching?

WITNESS: No, I believe it was in the neighborhood of 6:30.

PETRONE: No, I meant were we switching within ten seconds.

WITNESS: We were at -10 minutes and holding for this communication problem.

PETRONE: Yes, I know that but, in relation to the fire or the flash or the glitch of the communications when was the last time there was direction to do switching?

WITNESS: At this, when they switched from Black 3 to Black 2 and someone screamed - Mr. Chaffee I think screamed, we have a fire in the SC, immediately I run and Mr. Babbitt threw his headset down and was coming behind us at the same time.

DEBUS: Can you describe what Grissom said, it was garbled, could that have been a call of fire or something? Was that around the same time?

WITNESS: Pardon me?

DEBUS: You said that as you checked communications that Gus Grissom said something, that it was garbled.

WITNESS: Well, they were talking to them.

DEBUS: Right.

WITNESS: The astronauts. And they were checking this communications problem.

DEBUS: And when was it?

WITNESS: It was just prior to switching from Black 3 to Black 2 or from Black 4 to Black 3, whichever it was.

DEBUS: And then was that after the word fire?

WITNESS: That was before the word fire. A matter of maybe 30 seconds or a minute.

VOICE: You heard this through your headset?

WITNESS: No sir, I heard it through the monitor. I wasn't on the squawk box.

THOMPSON: Well, I think there's a point here that has been established and perhaps he should renew it. As I understand it the hold was on account of the communications problem.

WITNESS: That is affirmative, yes sir.

THOMPSON: It was on the ten-minute hold? Because of the communications problem? And then, is it correct that some change there decided that everybody switch to another channel because of that problem?

WITNESS: Right, they were switching trying to determine what the problem was. Whether it was inside the spacecraft or the blockhouse or just where.

THOMPSON: The communications problem.....

VOICE: They were switching around from different things.

BORMAN: Internal switching, internal SC controls.

WITNESS: Right.

PETRONE: Dr. Thompson, I think on this....

VOICE: They had done this prior on the C-band or S-band or something else.

PETRONE: You can get a communication engineer to relate how they, what they do in the SC vs. on the ground. Remember, we said we were on S-band communications. And, this configuration is very important, what channel they were on, what was being over the air, whether you were OIS or operations intercom system. What switching is done on the ground vs. what's in the SC. I think that's most important.

THOMPSON: Well, there's one point I would like to be clear on and that is the duration or the previous history of this problem, how long prior to this final switchover had that problem existed. Had it been, had it existed for two hours?

PETRONE: Yesterday, in our summary, when the astronauts in their suits got into their suits got into their SC, it was the first time you could make a communications check with the actual speaker system and so on. And, there had been a series of difficulties in being able to hear. Either due to the air rushing by the mike or due to other difficulties, there had been a series of let's go VHF, go hard-line, OIS, or S-band, so this had been the entire time they were in there, at various times there were switches in communications being made.

THOMPSON: Well, in other words, there was nothing so unusual about having a problem in communications. Is that the point?

PETRONE: Yes, there is nothing unusual....

THOMPSON: We will develop in a subsequent.

PETRONE: At that particular time, that was nothing unique?

THOMPSON: We will develop the actual timing of this thing I think in subsequent review of the information.

VOICE: I guess it is a fair statement to make that the channel switching that this man did and the other man did, there's no physical connection between this man

between those systems and the spacecraft.

THOMPSON: Well, we will.

VOICE: Except they were switching at the same time.

VOICE: He said they were switching at the same time. Now that's the thing I think we'll have to, I don't think you would even know they were switching at the same time.

JEFF: I think we have apparently got just one point that seems somewhat important and that is to say whether because of the switching of communications one didn't hear the word "fire" for the first time.

VOICE: Yes, I think that will show up later.

THOMPSON: We will have a review of events, recorded events. It will clarify that to the extent it can be clarified. But Gleaves is not the man in the position to give us much. Information on that as far as I can see except to establish the purpose of the hold and the fact that it's been a problem.

VOICE: You were monitoring the crew panel....all this time?

PETRONE: Yes. I was on 1, 2, 3, and 4. I was on all the channels.

MATHEWS: Any garbled conversations that you couldn't identify the nature of the conversation?

PETRONE: No.

THOMPSON: Let's get back to any further questions that you want to ask now before we let Mr. Gleaves go.

VOICE: Mr. Gleaves: Did you go out the door before Mr. Babbitt?

GLEAVES: Yes sir.

VOICE: You did?

GLEAVES: Yes sir.

GLEAVES: In fact, Mr. Hawkins was first and I was behind him and who was behind me, I don't really remember. But I know he and I were the first two out this door.

BORMAN: I was going to ask: Can you give us your estimate of time between when you first heard the fire call and went into the White Room? How much time do you think that took? And between the time you decided to exit the White Room before this big explosion.

GLEAVES: I would say it was just a matter of just a few seconds.

BORMAN: There was two periods of a few seconds each then you would say?

GLEAVES: No, I would say from the time he hollered "there is a fire in the spacecraft"

and we started running until the time we headed for the door, was just a matter of seconds.

BORMAN: Yes, well, I was trying to break down the two periods; one you went in the White Room and then you saw this flash outside and decided we better get out of there.

GLEAVES: And we immediately, there was no hesitation, we immediately turned and ran out. In fact, I almost ran over Mr. Hawkins.

BORMAN: The first time was how many seconds would you guess to run that distance to get into the White Room before you decided to switch.

GLEAVES: Just a couple maybe three.

BORMAN: And then you started running out and got about to the door and this other thing happened....the Bang....Would you say that was "2-3" seconds? Was it almost that long between the flash and the other "boom"? Was it about as long as it took you to get out of there?

GLEAVES: No. When it flashed, then we remember smoke, then immediately it blew.

BORMAN: So there wasn't much time to....

VOICE: But he got all the way from the White Room out to the orange door in that length of time.

GLEAVES: No, we got almost to the white door which is maybe as far as here to the mike. And it's not that great a distance from there.

VOICE: You go through the white room door?

GLEAVES: Right.

FAGET: From the time you heard fire until the time you heard the bang.

GLEAVES: Pardon....

FAGET: From the time you heard fire until the time you heard the relief valve.

GLEAVES: I say it couldn't have been over 10 seconds at the most....or 15.

YARDLEY: You mean, it might have been on order of 10-15 seconds? But in the other period it was only one or two seconds.

GLEAVES: That's right.

BAXTER: Sir, back to the....we, I say we....there exists procedures for emergency egress. Pad egress. I know you can't think of everything, but do you have a procedure that would come close to meeting this kind of thing and did you or were you just reacting spontaneously or did you have pad egress procedure you were trying to do?

GLEAVES: No sir, we are well aware of how to get these hatches off. Then he hollered

"fire" and all we could think about was to get the hatches off.

BAXTER: Could you have used more help?

GLEAVES: No sir.

BAXTER: You couldn't physically get people in there?

GLEAVES: That's right. After the explosion we re-entered the White Room and the fire was too great and the heat and the smoke was too intense....you could not breathe in there. After we could not breathe....

VOICE: I believe they had more help during that period that they would have under a hazard egress condition.

BORMAN: I think there is one thing of significance here your job was in 10 minutes to get that hatch off.

PETRONE: No.

BORMAN: Were they going to pull the hatch?

PETRONE: We were going to plus three.

GLEAVES: The astronauts were going to pull it from inside and we were to assist them on the outside of catching the hatches as they came out.

PETRONE: In 10 minutes he was going to pull the umbilical when we picked up the count. The egress would have been practicable at the end of the count planned at plus three hours.

VOICE: What were the words from the crew the first words you heard?

GLEAVES: When Babbitt switched channels, the first thing we heard was that one of them hollered, "We have a fire in the spacecraft".

VOICE: It wasn't just fire?

GLEAVES: No sir. "We have a fire in the spacecraft."

VOICE: That was actually the sentence?

GLEAVES: He may have hollered the word "fire" before Babbitt switched. And then he did say, "We have a fire in the spacecraft."

THOMPSON: You were not wearing a headset?

GLEAVES: No sir. I was listening to the monitor.

THOMPSON: Any further questions?

THOMPSON: Well, thank you, Mr. Gleaves.

JEFFS:

Mr. Chairman. I know it is slight side point here to this. It came up. We talked about it. I know my people have been trying to work with that garbled transmission too. To see if we can get some information out of it. I presume the data team is also working with that and you will hear a report on that, later on. There might be something there we should try and see if we can't extract.

LEWIS CURATOLO

NAA

FEBRUARY 22, 1967

My assignment as Pad Leader on Spacecraft 012, I was responsible for 1st shift activities concerning Test and Operation of the Spacecraft and Ground Support Equipment at Launch Complex 34. The scheduled activity for January 27, 1967, was the performance of OCP-0021 (Plugs Out Test). Chronologically, to the best of my knowledge the events of the day were as follows:

Power was applied to the Spacecraft and Ground Support Equipment at approximately 0813. Normal power up procedures were followed. System power up began almost immediately after the Spacecraft, Ground Support Equipment power up. No major discrepancies were noted during the power up sequence.

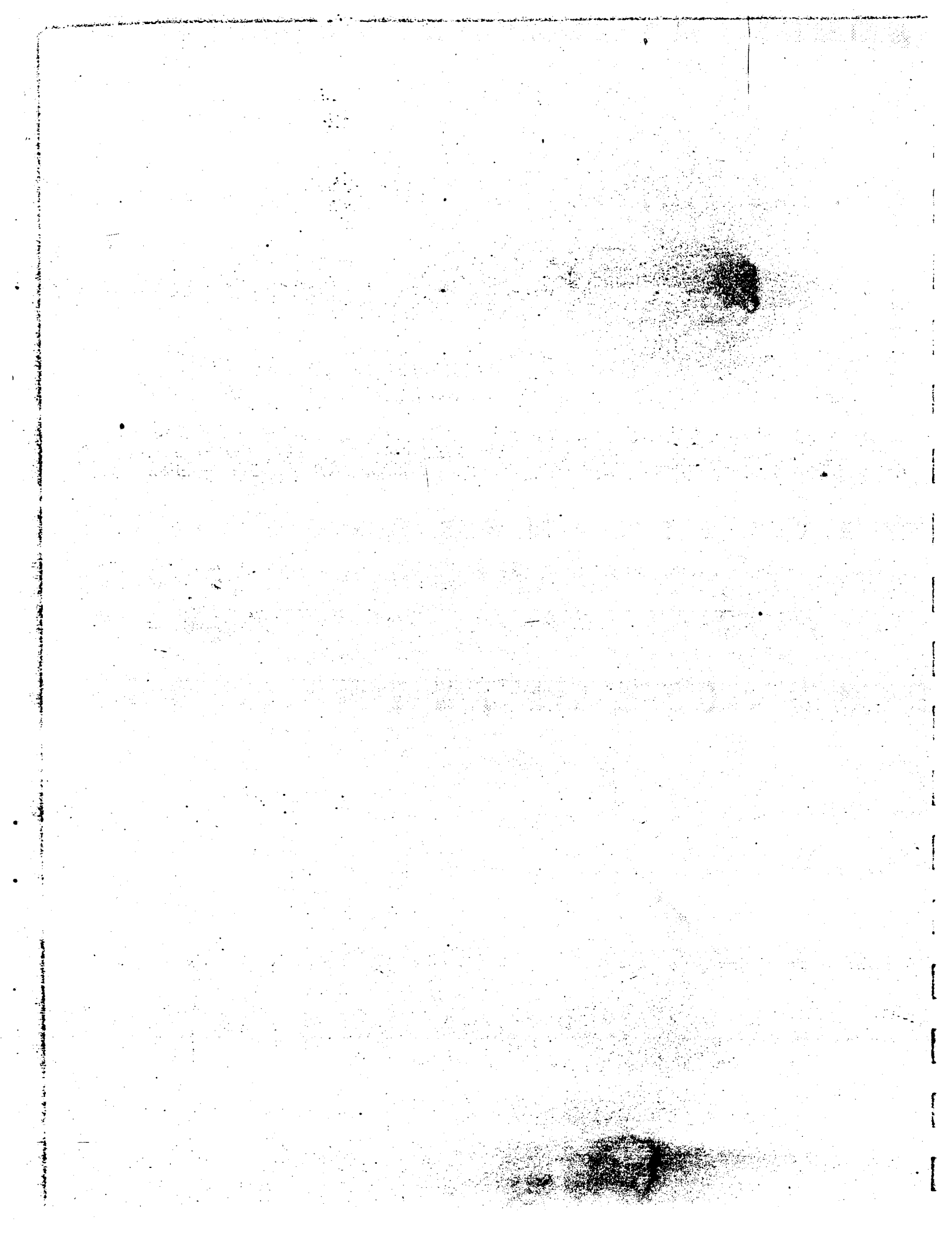
During the power up portion of the procedure we experienced many OIS communications problems. At approximately 1300 I notified the Test Conductor and Test Project Engineer that we were ready to perform Crew ingress. The Suit Technician and the Spacecraft Technician performed the pre-ingress layout of the cockpit and couches. This procedure consists of laying out the pilots seat and shoulder harnesses, and routing of the O₂ umbilical hoses. I instructed the Spacecraft Technician to remove all foreign objects and materials from the Spacecraft interior. At this time the Technician handed out a number of plastic bags and some foam rubber mats, which we normally use for protecting wire bundles and Spacecraft honeycomb structure. During the pilots ingress I handed the Spacecraft Technician two pieces of foam rubber wrapped in velostat which were to be used for protection of the inner hatch during the scheduled emergency egress procedure.

After completion of the Crew ingress we proceeded with Hatch closeout, and Cabin purge, as directed by the Environmental Control System engineer and Test Project Engineer. During Cabin purge we detected a strong pungent odor which smelled like MEK. We reported this to the Environmental Control System engineer, and he directed us to do another purge because the O₂ content inside the cabin was only 75%. We did another purge and pressurization and obtained a 92% reading on the analyzer. At this time we were directed to proceed with outer hatch and Boost Protective Cover closeout. We installed the outer crew hatch and started with the Boost Protective Cover installation but experienced some difficulty in getting the Boost Protective Cover to lock in, so I notified the Test Project Engineer and asked for an Interim Discrepancy Report. The Boost Protective Cover was left unlatched and we were instructed by the Test Supervisor and Test Conductor to clear the White Room. I followed the Test Conductor's instructions and at this point (1730) the 2nd shift Pad Leader (Don Babbitt) relieved me. After giving Mr. Babbitt a turnover on the next sequence of events I left the service structure and positioned myself in the Operations Trailer to monitor the "Liftoff" sequence of the procedure. This was my location at the time of the accident. Approximately 5 to 10 minutes after the accident I was instructed by the CVTS to go back to the A-8 level of the service structure to relieve Mr. Babbitt. Upon re-entering the A-8 level I observed that some areas of the Spacecraft exterior were still smoldering, and the Crew Hatch had been removed. I instructed the firemen to remove the shear panel from the White Room to allow the smoke to dissipate and allow the interior of the Spacecraft to cool. I entered the White Room and observed that the flood lights on the Crew Couches were still illuminated and the main display Console lights were still lit. I reported this condition to the Control Room and the blockhouse. I observed that the body of the Senior Pilot was wedged between the Crew Couches and the hatch bulkhead; the Command Pilot was positioned in the center couch with his body partially hanging over the center couch. The Pilot was in a reclining position in the Pilot's Couch.

I observed that the Command Pilot's leg pans were in the rest position, the Senior Pilot's leg pans were in the boost position, and the Pilot's leg pans were in the full down position.

I was relieved by Mr. J. Murphy at approximately 2100.

/s/ L. Curatolo



L.D. REECE

JANUARY 27 - 28, 1967

At the instant of first indication of a problem, I was on station at the cut-out in service tower directly above the fly away umbilical. I was standing on the side of the cut-out nearest the pad leader's desk. When the 10 minute hold was announced, I had moved around only slightly and had stayed pretty much in this area listening to the communications problem being discussed. I believe communications requested a test count from one of the crew so he could "Investigate Cross Reception Between Black 2 and Black 3."

A very few seconds later a seemingly calm voice said, "There is a fire in the C/M" or "There is an electrical fire in the C/M."

Turned toward the C/M intending to go into White Room and assist removing hatch. Immediate (1-2 sec.) there was a sheet of flame shooting out from C/M 17 access. Another 1 sec. I was inside White Room with one or two other persons, I don't know what happened the next 1-2 seconds, as I became scared and turned and ran across swing arm to elevator where several people were yelling and screaming that there was a fire and to help us.

A couple of seconds later some one got their wits and yelled, "Fire Extinguisher." Some else yelled, "Gas Masks." I got the extinguisher from hook west side of No.22 elevator door and carried it back to step down and handed it to Gleaves. Turned back got a couple of masks; put one on; gave one to someone and went back to White Room to open hatch. Smoke was so thick, very black, could not find tool or anything else. Went to level A-8, had nothing to use. Went back to swing arm outside door, then returned to White Room two more times trying to open hatch and leading Gleaves out as his mask didn't work and was blinded and choking. Last time inside Gleaves located tool, got B.P.C. cover off or partially off, left again, and I stayed and helped Hawkins remove outer hatch. I think I got scared again as I returned to swing arm, then went back to find hatch (inner) finally being pushed in. I could see nothing at all, but finally made out the left hand head floodlight very faintly. I was very highly excited at this time, and thinking I heard crew I leaned in as far as I could feeling around center couch. I felt no one, but still convinced I had heard them, I took mask off yelled several times to crew, felt around, then left mask on center couch and returned to swing arm.

I tried several gas masks after this, but all were broken or would not work. In meantime several men had been applying extinguishers, so as area got smoke cleared out, I gathered all Inspection Documents few at time and put on southeast elevator and called Inspection Trailer to meet me at ground level.

At critical time between hearing crew announce fire and going out swing arm, I just am not sure how many explosions occurred, possibly two.

/s/ L. D. Reece

RICHARD A. HAGAR

NAA

JANUARY 27, 1967

REPORT ON 012

I was monitoring the OCP on level 8 at the plus axis with Dale Hickenbottom. Dale told me there was a fire in the command module. I started for the White Room and had reached the +Z axis when I heard two loud pops. I stopped momentarily and at that time fire shot out of the command module at the +Y and -Y axis. The time elapsed couldn't have been more than a couple of seconds.

/s/ R. A. Hagar

JANUARY 27, 1967

SECOND STATEMENT

While monitoring the OCP I heard the report given "fire in the spacecraft." I was on level 8 at the +Y axis. I started for the White Room and as I reached the +Z axis I heard two loud pops, at this time fire blew out of -Y and +Y access panels. I went out on one of the elevator arms and at this time all of level 8 was on fire. I then proceeded to leave the tower.

/s/ Richard A. Hagar

JANUARY 28, 1967

Everything relating to this AS 204 plugs out test is classified in accordance with the mission failure plan. My name is Richard A. Hagar, my organization is North American Aviation, my position is spacecraft electrician, my supervisor is Carl Black; and my station call sign is SCO. On January 27, 1967, I was sitting at the -Y axis of the command module monitoring the OCP with Dale Hickenbottom, QC with North American. At approximately 6:30 there was a broadcast on the net that there was a fire in the command module. At this time I left my position - I was monitoring here, and walked to the +Z axis going towards the White Room. At this time I noted two loud pops, two loud bangs, and at this time fire shot out of +Z and the +Y and the -Y axis. Quite a bit of flame to be exact. At this time, noting the flame coming out I turned and went out onto one of the elevated platforms; however, I left the gantry. At this time, I reported to the tech trailer and reported to my supervisor, Carl Black, and stood by the trailer until approximately 11:30 when we went to the operations trailer for a short meeting where we wrote down our recollections of the OCP and the test and what had happened on the level, and then we were to come to the War Room for another meeting. At this time, Mr. Pearce asked Dick Bachand and myself to go into the command module after they had removed the astronauts and check through the switch positions and so forth to see if there was anything unusual and maybe out of place. At this time upon entering we went to the OCP up and around where they were testing at T-minus 15 minutes. Up to this point everything seemed good. The two main things that we did note, panel 150, the pyro panel, was out of position; it is normally mounted on the forward equipment bay in the right hand corner and it was approximately 8 inches forward of the equipment bay sitting on two brackets. It had not, from all appearances blown out since the mounting screws were laying right in front of it in a neat pile, and if they had of blown, why they would have stripped the screws and probably blown around the command module there. There were three circuit breakers engaged, they were Batt A power entry, Batt B power entry and Batt C power entry. The other circuit breakers on the panel were open. Starting after T-minus 15 minutes where we

would have picked up the count, which is T-plus 36, the only two things we checked into the sequence and fuel cell 3 on panel 18, fuel cell 3 to bus A was in the center position, and fuel cells 1 to bus B was in the center position. The other fuel cell switches on the busses were off, and you first step in sequence page 6, I don't recall the paragraph right now, but were to throw these to "ON" momentarily. It looked like this might have been done ahead of time, I don't know what bearing offhand, this is done but going on 9206 sequence 06 the battery relays busses were open and on the commander's panel 8, which would have been a few of his call-outs. The rate gyros were in the normal position and it looked generally pretty good. The test light or the abort light was hanging about half way out. It looked like there had been some flames shooting out beside it. But I believe that does it generally. This is all I have to relate concerning this test.

RICHARD A. BACHAND

NAA

JANUARY 27, 1967

At the time of this incident, I was standing about 10 feet from the outside between the +Z and +Y axis, level 8A, facing away from the C/M. When I heard the astronaut give the alarm over the headset of "Fire in here," I turned to look at the C/M. I heard a low burp, then a large whoosh, then a wall of flame from the side of the C/M jumped from floor-to-ceiling and a pressure and heat blast pushed me backward. I dropped my headset, turned, and ran to the exit on the northwest corner. I called the elevator which arrived in about 30 seconds and went down in it. This is all I remember of the incident at this time.

/s/ Richard L. Bachand
January 27, 1967

JANUARY 29, 1967

Everything related to this AS-204 plugs-out test is classified in accordance with the mission failure plan. My name is Richard L. Bachand, Tech Support Crew. My position is Spacecraft Mechanic Senior Electronic. My supervisor is Carl Black. My station call sign is SCET, which is the Command Module electronic tech. On January 27, 1967, I was part of the before-mentioned test. I was on the adjustable 8 level, Command Module level, between the +Y and +Z axes, approximately 10 feet from the Command Module. I was monitoring the command channel and active on green ten with MRCS (station call sign) at the time the alarm was given by the astronaut that there was a fire in the Command Module. I was facing away from the Command Module, and immediately I turned and looked at the Spacecraft; and I heard a small burp or thump which I didn't know exactly what it was at the time. I have been told since then that several others heard it and again find it is the Command Module pressure relief valve. Immediately following this, I'd say less than a second later, there was a large "woosh" and a wall of flame rose up between me and the Command Module. I'd say it was from floor-to-ceiling. Everywhere I looked there was flame. I dropped the headset, turned around, and ran for the exit which was on the northwest corner. I got out through the door, which locked behind me, and I'd say less than 30 seconds later, the elevator got there, and I went down on the elevator. This is all I have to relate concerning this test. My name is Richard Bachand.

STEPHEN B. CLEMMONS

NAA

JANUARY 27, 1967

1. First attempt to enter C/M via white room.
2. Went to get gas mask
3. Second attempt to enter C/M. Helped to remove B.P.C. access door and outer hatch to C/M.
4. Went to get another gas mask.
5. Helped to remove inner hatch.

JANUARY 27, 1967

After hearing the words, there's a fire in here, I turned toward the S/C and saw a white glow coming from the edge of the boost protective cover at the next opening as diagram shows.

Don Babbitt yelled, there's a fire inside and I ran toward the white room. Babbitt, Gleaves, Hawkins, L. D. Reece and myself tried to get in but by this time (10 seconds approx.) extreme heat and flames drove us out of the swing arm. We tried to find some gas masks but there was a little time required finding any. When we finally found some, one mask came off the hose and two could not be opened on port at bottom. By this time, the flames and smoke had subsided so that we could attempt to open the hatch. We finally removed the outer hatch and outer C/M cover, after some difficulty because of a binding condition on B.P.C. By this time our masks had been used up. All this occurred within 4 minutes or less. With fresh masks, we attempted to remove the inner cover. On opening the last hatch we were driven back by the heat and fumes/smoke. I saw no fire and the small florescent lights on the seat head rest area was still burning. Before leaving, I stuck my hand inside but I could feel nothing or see anything because of smoke/heat. I did not hear any sounds emitting from inside. By this time my gas mask was used up and the fireman arrived. All this took place no longer than six minutes after it started, or so it seems.

Then joined the other personnel putting the fire or remains out. There were not too many significant items except when it started. There seemed to be a loud venting of gases, then ignition which sounded like a gas jet being ignited. There was no loud explosion and the fire seem to come from all directions exiting from the command module access ports.

/s/ Stephen B. Clemmons

JAMES EARL CROMER
PAA
JANUARY 27, 1967

1215 - I went on station for the 220 foot level of umbilical tower for egress mode.

- 1245 - This was about the time the astronauts arrived. From this time until accident it was routine test on elevator which was in egress mode all this time.

About 1530 - During this time Bendix crew on 220 foot level changed crews on the unit on 220 foot level. I obtained permission from French Johnson for them to ride elevator. I was in Blue 3 on the head set and was monitoring Black 3 at this time. There was two sampling men which came up and took samples in the 8th level and then returned to the ground.

Accident - At the time of the accident, I was on 220 foot level standing beside elevator looking at White Room, there was a flash of fire which came out of the White Room door, the concussion blew the side doors open, personnel left 8th level onto the catwalks to get their breath. Personnel came from White Room and told me to tell someone that the spacecraft was on fire which I repeated over Blue 3. I asked for gas mask to be put on elevator 1 to the 8th level catwalks. I also reported the 8th level was on fire. I assisted the personnel on the 220 foot level with gas masks and the one fire bottle on 200 foot level. I asked that the elevator stay at 220 foot level which it did for quite some time. Personnel used all fire bottles that could be found. Personnel made repeated trips into the capsule, but had to return for air because of the gas and smoke. One made repeated trips in until one fellows put him and themselves on elevator which I sent to the bottom to the ambulance. The elevator returned to the 220 foot level for stay-by. From this time on Harry and I controlled the elevator from top to bottom for personnel that was permitted to use the elevator. We stayed in this configuration until we secured the elevator at about 9:50 p.m. (the egress) at the bottom level. Which then we went to elevator 4 and put it on express from the 1st, 6th, and 8th levels.

JOSEPH H. PLEASANT

NAA

FEBRUARY 7, 1967

On Friday, January 27, 1967, at approximately 1830 hours, I was on Level A-8 of the structure standing near the stairs to the White Room. At that time, someone yelled, there's a fire in the Spacecraft; and about that second, there was a muffled explosion and fire shot out from around the bottom of the Command Module in several places. The Level immediately filled with smoke and some visible flame about the Spacecraft. The CO₂ bottles on that Level were being used by personnel to fight the fire. CO₂ bottles were brought from another levels to help. Every attempt was made to open the hatch for the astronauts' escape. There were no elevators available, so I climbed from Level 8 to Level 6 over the cat walks and then to A-5 where I went into a Douglas room and called the Fire Department; but they had already been notified.

At that time, someone was paging for the Tech Trailer to come up on headset. This was made several times. I went to the Tech Trailer by way of the stairs and reported in on headset but no answer. I immediately started with a head count of the GSE personnel and notifying higher level of supervision. When the first-aid trucks arrived, I sent five GSE technicians to the Dispensary which had been on station or or near Level A-8. Names as follows: B. Belt, A. Journey, J. McConnell, W. Wingfield and W. Schneider.

/s/ J. H. Pleasant

BRUCE W. DAVIS
NAA
JANUARY 27, 1967

I was standing at the umbilical on the adjustable 8 level at the time of the fire. Just previous to the fire I heard that the astronauts were having trouble with communications. They were instructed to change to Black 2 channel. At this time I heard someone say, "There is a fire in the cockpit." I turned around and after about one second I saw flames within the two open access panels in the command module near the umbilical. Someone said, "She's going to blow." Before I could turn around I heard a whoosh and flames shot out of the access panels. Someone shouted, "Clear the level." As I turned around and ran toward the south west door I felt a large breeze and felt the flames. Several of us got out the door and turned to look back through the window and all we could see was flames. Someone said the Launch Escape System is going to blow and some guys climbed down the beams to the next level. We looked back and someone said, "There's nobody alive in there." The elevator finally came up and we got on it and rode down to the bottom floor.

/s/ Bruce W. Davis

FRIEND D. HICKENBOTTOM

NAA

JANUARY 27, 1967

I was on level A-8, on a head set, monitoring the test, located on the south side of the tower, near the Quality Control desk.

I was facing east when I heard a report on the headset that there was a fire in the Command Module, this report I believe came from Chaffee, at that instant I looked northeast and saw a spurt of flame come from the area under the white room and heard a report that sounded like a small explosion followed by a louder, more distinct noise, and flames shot out of the openings of the Command Module.

At that time I left the headset and went to the phone which was located on the same level at the southeast corner of A-8.

I reported a fire in the Command Module on Complex 34, Level A-8 to the PAA Fire Department and waited for the indication that they understood me, which they did.

At this time I walked to the elevator on the southeast corner, called it and returned to the door where a fire extinguisher was, I took it and started to fight at the south side of the Command Module and continued until the firemen arrived.

Time was approximately 1820. crew reported fire, Fire Department called on way to get fire extinguisher, elevator arrived, (Rogers, NASA Quality Control, covered me with smock), ran out of extinguisher, flames are at all ports, up to 5 feet high near pad leader desk. Documents caught fire from objects blowing out near Pad Leader's desk. Got new fire extinguisher, flames are high again, flames secured on area near Quality Control desk, partially secured by the Pad Leader's desk. Fire Department arrived and finished the flames in the area near Pad Leader's desk. The area near the umbilical island was hard to put out.

The area had such dense smoke that it was not possible to determine where the major flame area was, but it was definitely on the north side near the umbilical and on around near the hatch. Flames were at times very near the base of the Launch Escape System (LES).

Hagar and I were discussing the jackets and other non-test related items, the count was at about 10 and we were having communications problems. This communications problem was not of such magnitude that it kept me from hearing the report from the astronaut that there was a fire in the cockpit.

/s/ Dale Hickenbottom

JERRY W. HAWKINS
NAA
JANUARY 27, 1967

I was located at the swing arm at the passway from level A8. Someone yelled fire, and I saw flame billow from the Spacecraft toward the pad leader's desk. The next thing, fire was showing up in many places; people were coming toward the swing arm; the area was rapidly filled with smoke and fire. We opened the swing arm exit and went to the umbilical tower to get gas masks and return to the white room, but fire and smoke was blinding. We ran back to the umbilical tower and found a fire extinguisher, returned to white room and put the fire out around the hatch area. My hose came off my gas mask, and I had to return to the swing arm. Gleaves, my lead man, came out a little later, how long I'm not sure, choking, and handed me his mask. He said "I got the B.P.C. hatch, get the others." I returned, and Clemmons and I removed the outer and inner hatches. We couldn't see inside, but leaned in and felt for the crew. The heat was tremendous, and I got ashes or soot on my hands, and all objects were too hot to touch. I was getting smoke in my mask at this time and left momentarily for fresh air and a flashlight - 10 - 15 seconds - returned to hatch with light and there was nothing but what appeared to be a blanket of ashes across the crew couches, and no one could be made out anywhere in the C/M. The firemen arrived, and I left the white room to inform pad leader of condition inside C/M. Then helped Gleaves to umbilical elevator down and to medics.

/s/ Jerry W. Hawkins

W. DONALD BROWN

NAA

JANUARY 28, 1967

Was at Quality Control desk when Command Module access panel 10 seemed to ignite as a minor type explosion. During this period 2 wooshes (loud) of escaping gas were heard. The area L-8 became immediately full of smoke, grey. I went to L-7, top of Service Module (S/M), Sector I and II, were burning. Also quads A and B were on fire. Fire was coming from inside Sector I access from below the access (much grey smoke). I returned to Level-8 from Level-5 and smoke was still coming from under and left-hand side of BPC. Upon returning from L-6 with extinguisher was told to leave area. I do not recall any times (clock) of these events.

/s/ W. D. Brown

JESSIE L. OWENS
NAA
JANUARY 27, 1967

- Accident Report - Launch Complex 34, Level A-8
Time: Approximately 6:30

My position was near the Pad Leader's desk (by the water cooler). Garbled communications, but intelligible enough to hear switch to Black 4 or Black 2 - then fire in Command Module - I turned, looked at the Pad Leader, looked back at the Command Module at the White Room P hatch area, heard what sounded like the cabin relief valve open and high velocity gas escaping. Within two seconds (I estimate) high velocity gas came out the access panel in the +Y direction from the G and N (Guidance and Navigation System). Immediately this gas burst into flame somewhat like lighting an acetylene torch. I turned to go to the White Room at the above noted instant but was met by a flame wall. I turned to exit through the northeast door to the elevator and my hair was singed in the back under my white cap (evidence of the height of the flame). I exited to the crosswalk but no elevator was available - turned back to into the A-8 area but flame and door being latching type from inside, I couldn't get in. I climbed out on the structure and down the beams to the stair area, went down the stairs and to the nearest trailer and phoned C. C. Stephens.

NOTE: The smoke I breathed was foul and of an irritating nature. The flame was orange.

/s/ Jessie Owens, NAA Supt.